

BEFORE THE ROSES
AND NIGHTINGALES

Excavations at
Qasr-i Abu Nasr, Old Shiraz

DONALD S. WHITCOMB

The Metropolitan Museum of Art, New York

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FRONTISPICE: Glazed ceramics from Qasr-i Abu Nasr. Left to right: top row: Fig. 24p, n; second row: Fig. 24h, s, u; third row: Figs. 26x, 79v, 26h; bottom row: 33.175.66 (not drawn), Fig. 74j.

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Foreword

The excavations at Qasr-i Abu Nasr were begun in 1932 during the Great Depression in the United States. The trustees of The Metropolitan Museum of Art had cut down on the fieldwork they subsidized in Egypt, but took the opportunity to authorize excavations—on a very small scale—in Iran. Shah Riza Pahlavi had abrogated the treaty that had given France sole permission to excavate in that country; thus it was possible to further the Museum's interest in Sasanian art and archaeology, which had begun with the joint excavations with the Germans at Ctesiphon in Iraq in 1931–32.

At Ctesiphon Walter Hauser, architect and surveyor of the Museum's Egyptian Expedition, was actively involved in the excavations. Joseph M. Upton, assistant curator of the Islamic Department of the Metropolitan, who had accompanied Ernst E. Herzfeld on an archaeological journey through Iran to Kuh-i Kwaja near the Afghan border, was there also. I, after my years of experience with the Museum's Egyptian Expedition, joined Upton and Hauser as the third member of the team at Qasr-i Abu Nasr and was responsible for the photography and drawing.

It would indeed have been most satisfactory if, after the preliminary reports of the Qasr-i Abu Nasr excava-

tions appeared in the Museum's *Bulletin*, a full report had been published. Unfortunately, for various reasons, this was not possible. These many years later Donald S. Whitcomb of the Oriental Institute of the University of Chicago has brought out the present book.

To interpret the archaeological work of others is indeed a difficult undertaking, especially in field archaeology, where, for full understanding, something is always lacking, no matter what the technique employed. In this instance the lacunae were great indeed, and, for this reason, we are particularly indebted to Donald Whitcomb. He gives scale drawings of the metal, pottery, and glass and reproduces his own inked versions of Hauser's plans of the site and tombs.

The conclusions and suggestions made in the text are those of the author and will doubtless inspire others interested in this period and the province of Fars to express their thoughts, too. However deep one delves into the ancient past, certain questions still remain.

CHARLES K. WILKINSON
Curator Emeritus, Near Eastern Art
The Metropolitan Museum of Art

Preface

The present study began as a casual interest in the Islamic ceramics found at Qasr-i Abu Nasr in comparison with those from Istakhr, both major unpublished excavations from the 1930s. I am grateful to Prudence O. Harper and the late Vaughn E. Crawford for encouraging my initial study of this aspect of Qasr-i Abu Nasr and for subsequently offering me every facility in resurrecting the records of the completed excavations.

It is my hope that my impetuosity in taking on the large task has resulted in a product that justifies their confidence. This research interest derived from my Ph.D. dissertation on the archaeological evidence for the economic history of Fars province in early medieval times. It was apparent in this work that painfully little archaeological evidence is available and that, although the large-scale excavations necessary to answer the broad questions I had in mind are now impossible, such excavations had been accomplished and were simply awaiting publication.

Publication is never a simple matter and is definitely less exciting than excavating; even when the digging takes place in a museum, the climate is important. I have been fortunate that the natives of the present location of Qasr-i Abu Nasr have been friendly and helpful—I am especially indebted to Holly Pittman, Barbara Porter, Jay Vogler, and Marcel G. Berard for their frequent and timely assistance. Charles K. Wilkinson, a member of the original excavations, has inspired me with conversation and especially with his superb drawings made at the site. A portion of the artifacts remained in Shiraz, which I have not been able to visit since beginning this research; it has been a relief to know that Wilkinson's drawings could not have been improved by reexamination of the artifacts.

This publication would be greatly inferior without the editing of Lauren Shakely, the design of Pauline Di Blasi, and the critical (but helpful) comments of my wife, Jan Johnson.

I am dedicating this volume to my parents, Scott and Carmel, who encouraged my eccentricity in wandering to the beautiful and friendly land of Fars, and the home that Shiraz became for me since 1966. I am afraid that in those days Qasr-i Abu Nasr was little more to me than an interesting stop, along with the Hafiziyah, on picnic expeditions. Walking around the crumbling walls, I found the excavation to be almost as old and vague as the original history of the site. Nevertheless it retained a beauty—at least for an archaeologist—that was part of the beauty of Shiraz celebrated by Sa'di and other poets. In a sense, *Before the Roses and Nightingales* is a misleading title; I am sure that Sasanian and even earlier poets had observed the roses and nightingales of the Shiraz plain and could agree with Sa'di that

The nightingales were singing on the pulpits of branches

Upon the roses pearls of dew had fallen.

And, again with Sa'di, the archaeologist caught up in details among the passing millennia should always remember that

The rose endures for five or six days
But the rose garden is always a delight.

DONALD S. WHITCOMB

CHAPTER I

Introduction

It was the second year that the excavations of the Metropolitan Museum of Chicago had made scientific discoveries on the mound of Takht-i Abu Nasr near Shiraz. But other than miserable graves with a few bones, red pots, gorgets, bronze helmets, trilobate arrows, earrings, rings, signet necklaces, bracelets, daggers, coins of Alexander and Heracles, and one large candlestick with three legs, nothing worthy of attention had been found.

Dr. Warner, who was an archaeologist and specialist in dead languages, tried in vain to investigate history from cylinder seals with cuneiform and animal and/or human forms and from signs on clay jars. Gorest and Freeman, his associates in clothes yellow and dirty, arms and legs bare that were burnt from the rays of the sun, cotton cap on the head and notebooks under their arms, were busy from morn to night directing the workmen, taking notes and photographs; but their discoveries were only an increasing collection of pieces of potsherds. In this way, little by little, each of the three became discouraged. . . .

Sadeq Hedayat, "Takht-i Abu Nasr" (1963)

In Sadeq Hedayat's short story the excavators go on to discover an ancient Persian mummy, and a typical mummy story unfolds. It is clear that the setting is the result of a visit to Shiraz and interviews with workmen who had participated on the excavations (who relocated The Metropolitan Museum of Art to Chicago, a city known from the Persepolis excavations). The result is a fascinating view of the excavations as the workmen understood it and a sensitive portrait of the feelings of the three excavators toward their discoveries. Qasr-i Abu Nasr produced no sensational finds, no palaces or temples, only an

apparently typical Sasanian town and fortress. Even the important collection of sealings had to wait forty years to be published and by then publication was a sort of salvage operation with an unrecoverable context (Frye 1973, preface). Happily this negative assessment was premature: the present report is an attempt to begin to rectify the situation. The changes in archaeology in fifty years have raised the valuation of this excavation and exalted the efforts of its excavators, in spite of their discouragement. It is very fortunate that no mummies were discovered.

The writing of this report on the excavations at Qasr-i Abu Nasr might be described as a study in deferred excavation, in which the digging takes place in a museum. It is still a matter of finding objects and documents. Although the sun and wind pose no problems, the romance of the field is decidedly lacking. The museum has become, in a sense, the archaeological site, more often a number of sites, and research into these sites needs a special methodology and orientation. Unpublished archaeological sites, in the present case in Iran, or the Middle East in general, are part of the legacy of the great flourishing of archaeology in the 1930s. One might expect that since this archaeological data has been available for almost fifty years, the meaning and import of the site would be well enough assimilated by this time to make possible a coherent, well-considered report.

However, the practice of archaeology is overwhelmingly characterized by an individual entrepreneurial nature, even in the modern terms of teams of specialists. This factor, in combination with a natural preference for the exotic, romantic setting, has mitigated against the study of "someone else's site." Thus these sites have remained buried in museums,

occasionally referred to as part of the history of archaeology but not as part of archaeological history. Yet the historical information contained in these earlier excavations is often vast and has characteristics impossible to duplicate today (if only because of the scale of these archaeological enterprises).

There are certain caveats in the production of reports of deferred excavations. First is the obvious consideration of the principal investigator, the archaeologist. The process of archaeological excavation is ideally the recovery of pieces of information and the organization of this data into a rational picture based on a model of depositional characteristics (stratification, locational patterns, architectural phasing, and so on). Study of an archival excavation is secondary, in that the data is no longer in pristine context but has been filtered through the model used by the primary excavator. Such models were not usually explicitly stated, since the tendency to theorize on the nature of archaeology is a relatively recent phenomenon. Excavators in the 1930s were highly intelligent and often conscientious scholars, and they brought to their excavations assumptions, hypotheses, even elaborate theories. Crucial to the understanding of such excavations must be a sort of psychological analysis concerning the assumptions and motivations of the principal excavator.

A second problem that often inhibits the serious study of early excavations is that of defective information. Even over an interval of ten years the best-maintained archive may become surprisingly dispersed (there is probably a general law on the natural tendency of materials in an archive to disassociate and migrate). The second-generation investigator is also faced with the nagging suspicion that the excavator kept a diary, daybook, or crucial map or plan, or even that he prepared his own report, the manuscript of which gathers dust on a forgotten shelf. Defects in the archaeological data are more serious, the result of advances in excavation techniques and appreciation for the contextual information that is potential in an undisturbed site. Early excavations often appear grossly lacking when scrutinized from a modern prehistorian's or anthropologist's viewpoint. Nevertheless, as W. W. Taylor pointed out rather dramatically (1948), all excavations tend to be uneven in their treatment of the data, and hard compromises, even distortion, are part of the most con-

scientious "scientific" excavation. Once its defects are accepted, however, the well-recorded early excavation still yields much reliable information.

Third, the series of hypotheses that the student of a site brings to the excavation is at least partially generated from the data itself. This post-factum hypothesis formation, while part of the procedure in an excavation, cannot be tested in deferred excavation, either because of political or economic factors or because of the destruction of the site. This is a frustrating limitation but one faced by many modern excavators in writing their reports. Again it would be surprising if the issues and interests of the primary excavators matched precisely the concerns of the recent student, although many of the topics now considered explicitly were considered at least implicitly by earlier generations of excavators.

Therefore the present report on the excavations at Qasr-i Abu Nasr is principally the work of the original excavators, Joseph M. Upton, director of the excavations; Walter Hauser, field director in charge of excavating and planning the architectural remains; and Charles K. Wilkinson, expedition artist. Selection of the artifacts and understanding of plans proceeds from their understanding of Qasr-i Abu Nasr. Although I was not present during the excavation, my familiarity with these artifacts of the excavation (especially the large photographic archive) has given me a high respect for the energy and dedication of these scholars.

Part of the reason they never produced a definitive report is that comparative materials are seriously lacking, a factor that makes this excavation all the more important. In discussing the history of the study of Sasanian art in 1967, Grabar noted: "Several excavations of Sasanian sites were begun in the 1930s and early 1940s and Sasanian layers were discovered in other excavations. Yet, to the great discredit of Orientalism and of an archaeological method which was more interested in the discovery of objects than in a scientifically valid documentation, none of these excavations was properly or fully published and, outside of some new plans of buildings, scholarship was only provided with huge masses of ill-dated and largely inaccessible fragments of decorated stuccoes" (1967, 25-26). The defects in methodology and data involved in the excavations are tolerable in that such publication might serve as a preliminary study and

background for further research in Sasanian and early Islamic archaeology.

The excavations at Qasr-i Abu Nasr should be considered in the context of the tremendous archaeological ferment in the Near East and Iran during the 1930s. It is fair to say that most of our present knowledge of (and questions about) Sasanian archaeology is the product of the pioneering work of that decade. The excavations at Persepolis by both Herzfeld (1931-34) and E. F. Schmidt (1935-39) included investigations at Istakhr and Naqsh-i Rustam. Schmidt made further contributions at Tepe Hissar (1931-32) and Rayy (1934-36), as well as at Chal Tarkhan (1936) and by his aerial survey of Iran (1935-37, which included Qasr-i Abu Nasr; see pls. 2-4). The survey by Stein along the southern coast of Fars brought Siraf to attention for the first time (1937); Ghirshman conducted important excavations at Bishapur (1935-37).

Further afield, the interest in Sasanian archaeology was initiated in Mesopotamia at Ctesiphon (1928-32), excavations in which the Metropolitan Museum participated; at Kish (1932); and at Al-Hira (1932). A decade of excavations at Dura Europos revealed a point of interaction, not always antagonistic, between Sasanians and Byzantines. Major Byzantine sites received the same degree of attention, but the archaeology of both the Sasanian and Byzantine empires languished between the 1930s and the 1960s. Even now the breadth of interest is curiously narrow. The reluctance to investigate the complex material culture of "medieval" historical periods has many causes. First among these must be counted the development of prehistoric archaeology, which brought new standards of precision and methods of recording information. Second is the failure of 1930s excavations to contribute meaningful historical information, a fault of partial publication or complete failure to publish. The rapidity and large scale of these excavations secured them places as models of antiquated and destructive (and ultimately immoral) methods of archaeology, from the viewpoint of modern archaeologists. Nevertheless these excavations were normally pursued by intelligent and conscientious individuals. The Near East is still afflicted with a number of irresponsible archaeologists (with fewer excuses for their methodologies). Happily the excavations conducted at Qasr-i Abu Nasr seem to have been of high quality.

Geographical Setting: The Shiraz Plain and Fars Province

Part of the attraction of Qasr-i Abu Nasr in the 1930s, as it is today, is its proximity to the modern city of Shiraz, the city of gardens and poets, in Fars province, southwestern Iran. Shiraz is situated on the northern side of the Shiraz plain near a dry river course and the more dependable Rukhnabad stream coming from the mountains (Fig. 1; [reproduced from the 1940 British Survey of India map; GSGS 3919] single hatching indicates land above 1,500 meters [5,000 feet], double hatching above 1,800 meters [6,000 feet]). This situation parallels that of Bishapur, Istakhr, Firuzabad, and other Iranian cities, located near a massif where a stream issues forth. The site of Qasr-i Abu Nasr is located approximately 6 kilometers east of the city of Shiraz, on the edge of the mountains of the northern part of the plain. The plain of Shiraz is roughly rectangular (as it appeared to Flandin and Coste, who made one of the earliest maps of the plain; in 1841, 1851-53, pl. 55). The northwest corner narrows sharply before the town of Juyum. The plain descends to a flat eastern end with salt marshes and a salt lake (Daryacheh Maherlu; Istakhri's Lake Jamkan). A range of mountains separates this lake from the valley, which continues southeast to the town of Kavar.

Settlement in the Shiraz plain is described as the Hummeh (Jammah) district, for which Hamd Allah Mustaufi Qazvini counted eighteen villages in the fourteenth century (Le Strange 1919, 114; Krawulsky 1978, 186). The distribution of larger villages is shown on Figure 1. Most of these villages are found to be south and east of Shiraz. Settlement in the Marvdasht plain, immediately to the north, has been dependent on development of irrigation systems from the perennial Kur River for the reclamation of lower (generally southeastern) lands. The pattern of settlement there, from the Sasanian period to the present, based on archaeological surveys (Whitcomb 1979b; Sumner 1972), seems one of continuous expansion on the basis of this irrigation technology (see Kortum 1976 for the modern situation). The conditions in the Shiraz plain are quite different. Without a large river the hydrological resources for agriculture are confined to subsurface water obtained

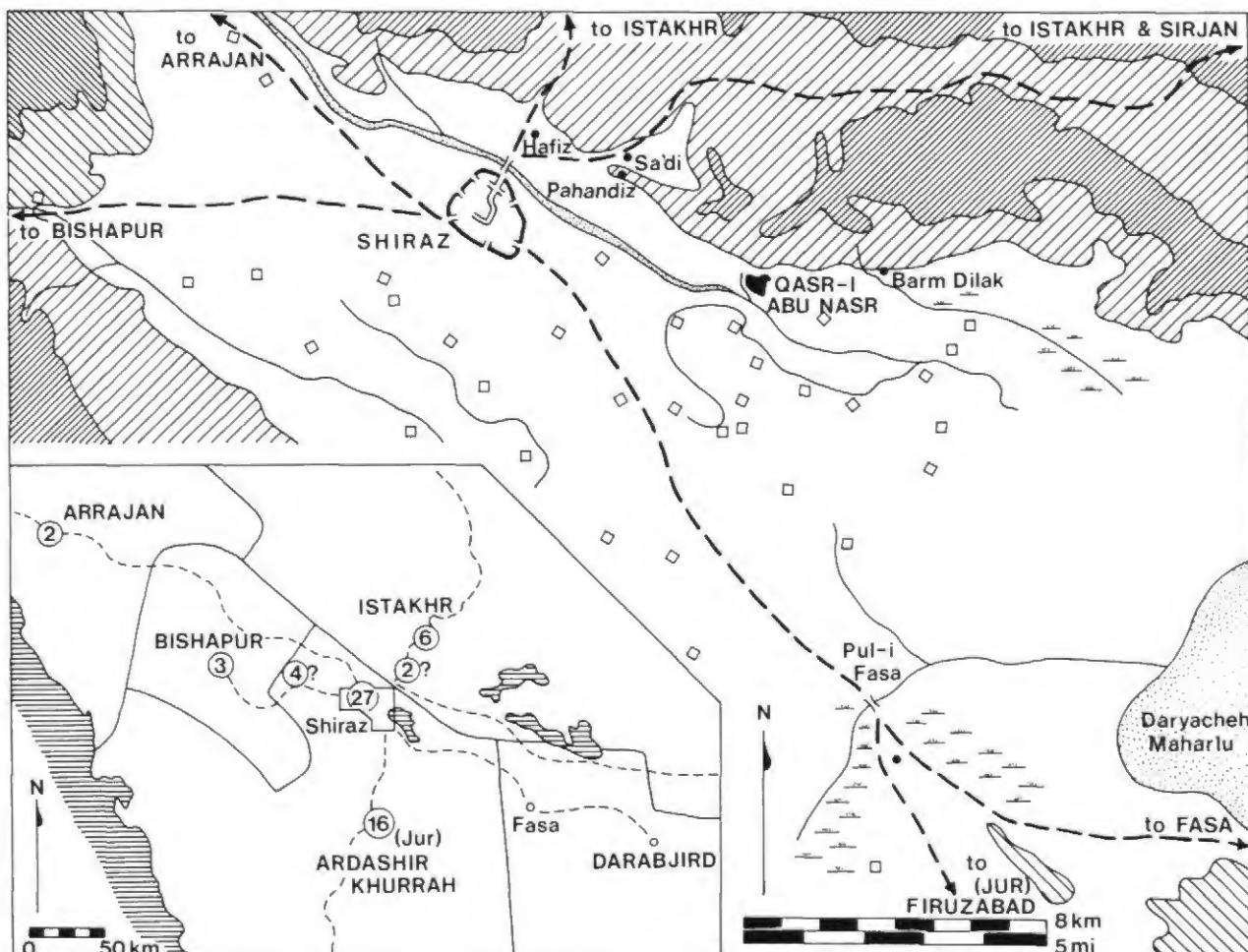


FIG. 1. Map of the plain of Shiraz and distribution of place names on sealings found at Qasr-i Abu Nasr

from wells, or *qanats* (Kortum 1973, 185 n. 1, 196-97). Mother wells are located in the central, northeastern part of the plain and the surrounding mountain edges (Kortum 1973, fig. 1). In addition there are several springs providing a limited quantity of water; one is located immediately west of Qasr-i Abu Nasr and another at Barm Dilak, near the Sasanian reliefs about 3 kilometers east of Qasr-i Abu Nasr. Although it is difficult to judge the antiquity of the *qanat* system, especially in the absence of a systematic archaeological survey (some data is available in Gotch 1968, 1969), settlement in the Shiraz plain has probably been more or less constant. Nevertheless it is possible that the processes of salinization have been more extreme here than in the Marvdasht plain and that earlier historic-period set-

tlements extended farther to the east, giving Qasr-i Abu Nasr a more centralized position.

Modern Shiraz is the natural focus of roads leading across the plain. North of the city is the Allahu Akbar pass and the most direct route to Istakhr and the area of Persepolis on the Marvdasht plain. An alternate route runs northeast past the tomb of Sa'di to the village of Bardij and thence either north to Istakhr or east to Sirjan and Kirman. The roads leading west are that of Juyum and Arrajan to the northwest and that of Khan-i Zinan and Bishapur (Kazerun) to the southwest. The principal road to the southeast runs down the middle of the plain to Pul-i Fasa (the bridge of Fasa). This road, as suggested by the name of the bridge, continues around the southern edge of Lake Maharlu to Fasa and

Darabjird to the southeast. Another road leads south to Kavar and Firuzabad (Jur) and on to the coast at Siraf. The control points for roads entering the Shiraz plain are thus at the Pul-i Fasa and at or near Shiraz itself. Qasr-i Abu Nasr might have been situated on an earlier version of the road running the length of the plain; it does not directly dominate major passes to the north (which are 4 to 6 kilometers away; cf. Upton 1973, 9). The position of Qasr-i Abu Nasr seems to be more calculated as a focus (or dominating point) for settlements of the Hummeh district, particularly if earlier settlements stretched farther east. In other words Qasr-i Abu Nasr appears to belong to the system of the valley rather than being the focus of a provincial system, as Shiraz became.

The province of Fars was well described by the medieval geographers, the fullest accounts appearing as early as the tenth century. The province was divided into five districts, or *kurabs*, each with its chief city situated on a boundary between the hot and cold lands (*sardesir* and *garmesir*) and drawing on a balanced range of products according to the geographical variation within the district (Whitcomb 1979a). This system of five districts seems to have developed by at least the early Sasanian period and to have continued with little modification through medieval times (the kurah of Arrajan has been examined in Gaube 1973). The modern city of Shiraz was introduced into this system during the Arab conquest in the early seventh century (see Chapter IV), initially as a camp for the army, situated almost equidistant from the three major cities (Istakhr, Bishapur, and Firuzabad), which proved prone to rebellion. By the period of the Arab geographers, Shiraz had become the metropolis of the entire province, with all roads leading into this center and a fiscal pattern that gave rise to the probably fictitious etymology of Shiraz as "belly of a lion."

This centrality of Shiraz is so natural that it is difficult to imagine the provincial system without it. Istakhr, which inherited its importance from nearby Persepolis, has roads running west to Arrajan (probably the Achaemenid royal road; D. Stronach 1974, pl. 49) and to the east to Kirman or Fasa and Darabjird. The Sasanian royal cities of Bishapur and Jur could have been directly connected by a road (Whitcomb n.d.), which thence ran both eastward and westward. When communication is attempted

between either Bishapur or Firuzabad and Istakhr, however, the natural route passes through the plain of Shiraz. This suggests that the connective aspect of the plain of Shiraz probably became important with the foundation of these cities in the late Parthian or early Sasanian period. This north-south focus in the plain of Shiraz is characteristic of the migration route of the Qashqai and other nomads in recent times (Johnson 1969; Barth 1961; recent routes skirt Shiraz to the east). There is no evidence that migration patterns extend back before Parthian or Sasanian times.

The structure of Fars province is reflected in the sealings found in the excavations at Qasr-i Abu Nasr (Frye 1973). Among the more than 500 sealings were a limited number bearing personal names (usually of officials) followed by place names. A count of the sealings with place names gives an approximate idea of the direction and strength of the intraprovincial system relative to Qasr-i Abu Nasr (Fig. 1, inset). By far the largest number of sealings with place names mention Shiraz (Šyl'cy; Frye 1973, 52). This has been taken as evidence that there was a pre-Islamic Shiraz and that it was located at Qasr-i Abu Nasr. However, this evidence may merely indicate the proximity of the two, not their identity (Gibson 1977, 226). The next largest number of sealings come from Jur, the capital of Ardashir Khurrah. Shiraz is counted by the medieval geographers as part of Ardashir Khurrah and the extension of this kurah northward to the plain of Shiraz might be regarded as a relic of the importance of Jur during Parthian (or early Sasanian) times. Certainly the sealings, which appear to be late Sasanian, testify to the primacy of communication between this district capital and the fortress of Qasr-i Abu Nasr. A limited number of sealings come from the other proximate capitals, Istakhr (six) with Marvdasht (two, though questionable; Frye 1973, 53), and Bishapur (three) with Siyakh (four, again only a possible identification; Frye 1973, 53). Finally two sealings come from Arrajan, suggesting some communication to the west.

The sealings thus suggest that, at least on an official level, Qasr-i Abu Nasr interacted mostly with Shiraz and secondarily with the district capital of Jur. Connections with other district capitals were very limited, and Qasr-i Abu Nasr did not play the

centralized role that medieval Shiraz did. Rather the sealings suggest that Qasr-i Abu Nasr was a regional town, perhaps typical of many, its influence limited to the plain of Shiraz. The identity of this fortress and its relationship with Shiraz (both the name and the city) must be postponed until the rest of the archaeological evidence from this site has been presented.

Chronology of the Excavations

The site of Qasr-i Abu Nasr was described by the excavators in several articles published in *The Metropolitan Museum of Art Bulletin* as a great crescent, with the black stone Achaemenid doorways located on the tip of the western horn and the fortress on the eastern horn (Fig. 2). The sloping area between these horns was known as the amphitheater, showing "vague traces of dwelling houses" (Hauser 1933, hereafter *BMMA* I, 39). A general description of the character of the site may be derived from following the course of the excavations, the process of discovery, and decisions (as much as they are preserved; most of this information now seems to have been lost).

Upton stated that the site attracted his attention because of the Achaemenid doorways; in light of the spectacular successes of Herzfeld's excavations at Persepolis, the prospect of another Achaemenid site was irresistible. Travelers' accounts of these monuments are nearly unanimous in the opinion that the Achaemenid doorways had been removed from another site, possibly Persepolis, at a later period. Even Herzfeld, who seems to have recommended the site, had written that the doorways were erected in Sasanian times (1926, 250). Nevertheless in 1933 the hope of an Achaemenid site was disappointed, or, as Upton worded it, "speculations were ended by the excavations" (1973, 6).

In late January 1933 the digging began around the doorways. This was not difficult, since two of the three doorways had been knocked down during a treasure hunt some seventy years earlier, the area around them cleared, and most of the other Achaemenid carvings carried away (Wilkinson 1965, with an illustration, pl. 47, of Fursat Shirazi's 1896 depiction of the stones remaining on the site). The

depth of the remains was less than 1 meter above the bedrock in this area. Hauser managed to recover a number of surrounding walls that neither connected with the doorways nor aligned axially with them. Several of these walls contained broken fragments of Achaemenid stones. This initial disappointment was compounded by the arrival in the spring of heavy rains, when "the excavated area became either a sticky mess or, in the trenches, a series of small ponds" (Hauser, letter to H. E. Winlock, 2 April 1933).

By this time the work force, which had at first comprised 175 men, had grown to 350, tramping about in the mud. Hauser shifted the excavations to the nearby northwest slope or "two high terraces," where the runoff was better. At the base of the slope, a large enclosure wall made of rubble some 2 to 4 meters thick was found and some of the diggers were dispatched to trace this wall, eventually all the way to the fortress (about 1 kilometer; *BMMA* I, 42). The slope, or terraces, was "cut through by a series of rectangular water basins and channels, the nucleus, perhaps, of a hilltop Persian garden" (*BMMA* I, 43-44). Beneath these features were walls of buildings belonging to the earliest period.

The construction around the Achaemenid doorways had revealed "at least three periods of construction or repair: an early one, rather fragmentary, in which the stones were held together by mud; a middle one with both plaster and mud mortar, to which most of the rooms belong; and a late one, which consists merely of repairs and unbonded additions" (*BMMA* I, 43). This evidence, given the shallow nature of the remains, was the only means of sorting out the architectural sequence; unfortunately Hauser was never able to apply these three building phases to the plans. He described the building around the doorways as "a series of small nichelike rooms, many of them probably covered with vaulted roofs and, in caravanserai or mosque style, open to the court, in which the stone doorways were left standing as monuments" (*BMMA* I, 43). He dated the middle period to the Islamic on the basis of eighth-century coins and ninth- to eleventh-century pottery; the third period was marked by Mongol coins and twelfth- to thirteenth-century ceramics.

Hauser somehow neglected to mention in his short field report that "from a layer of ashes it is clear that

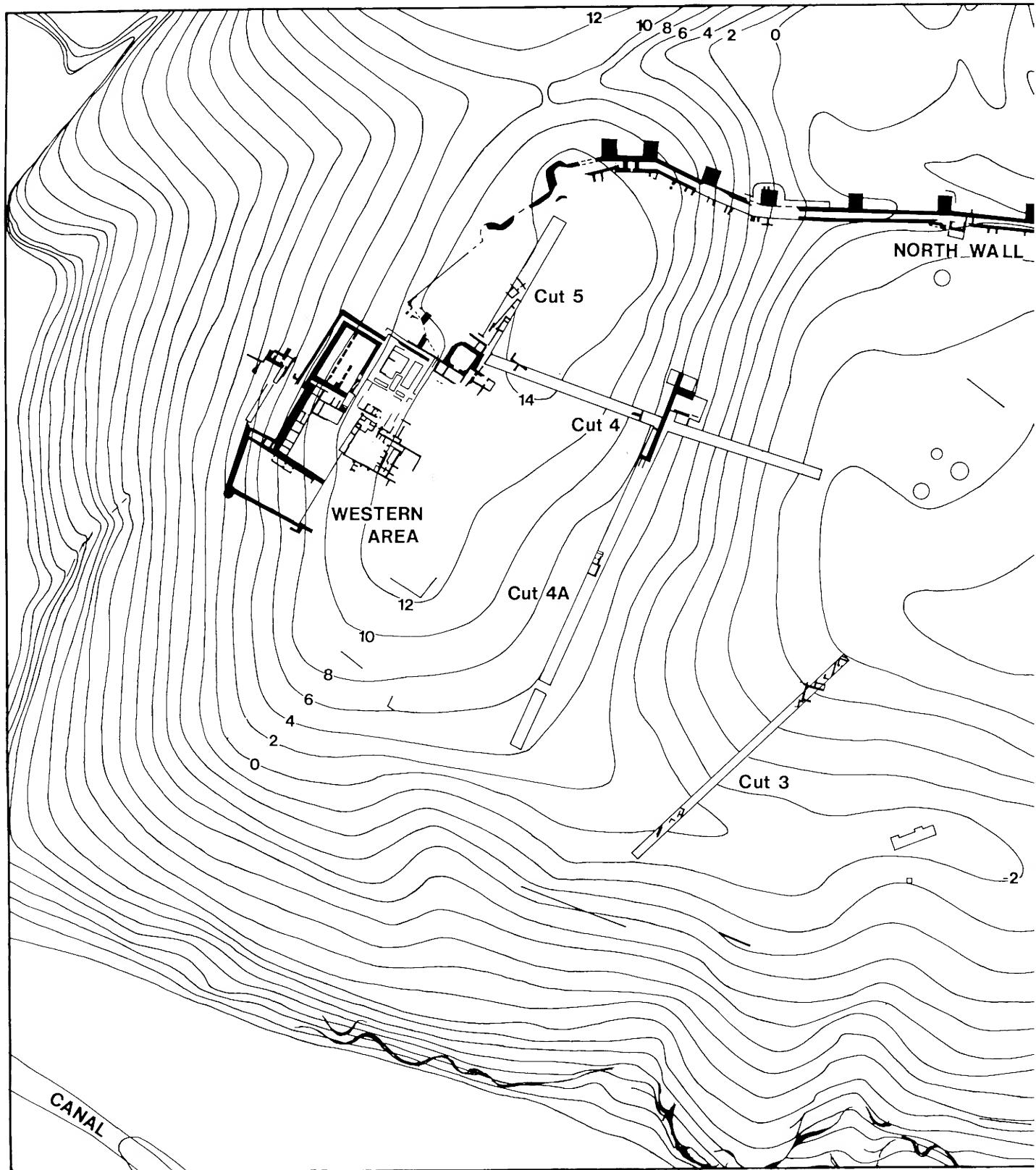
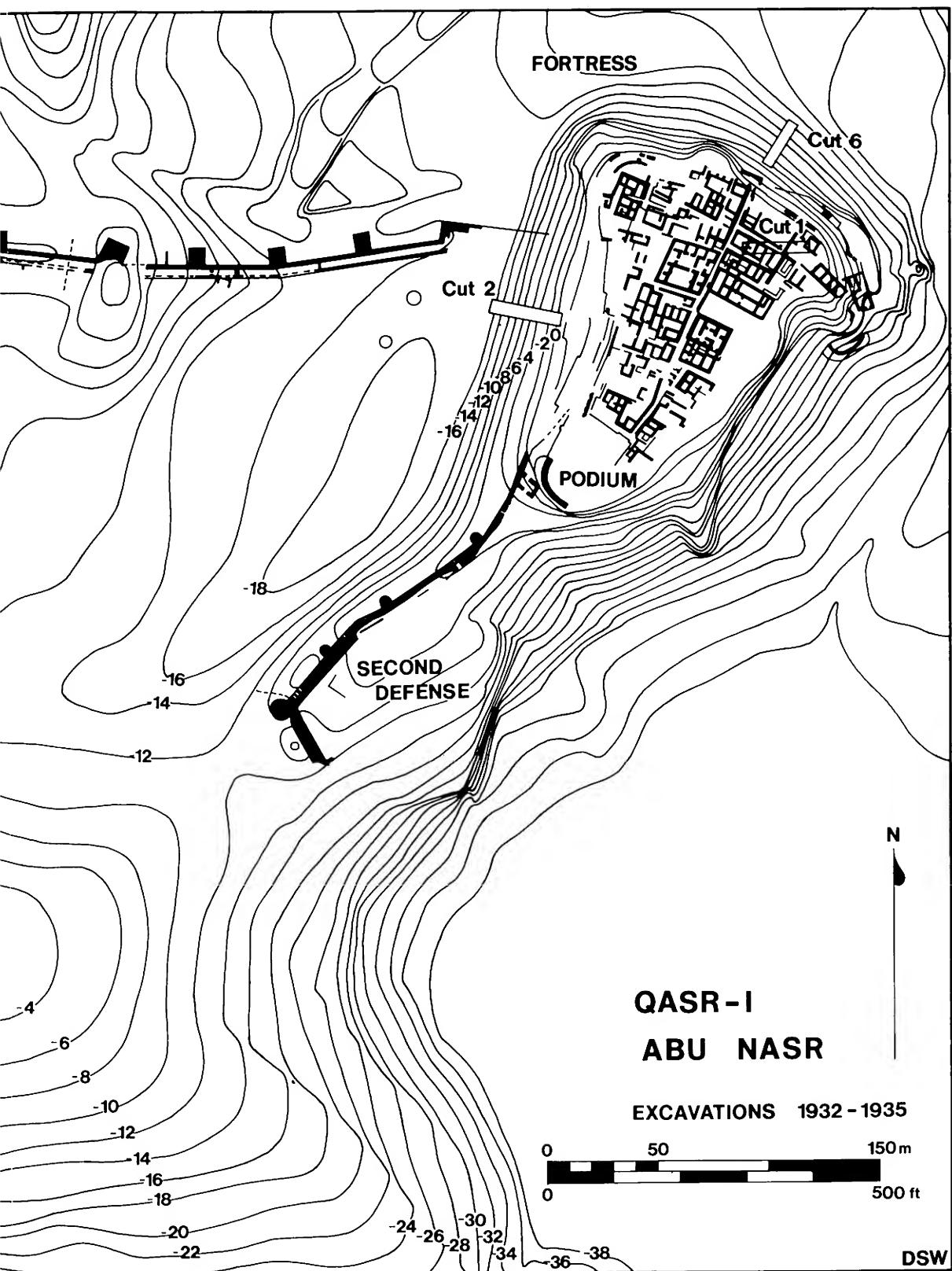


FIG. 2. Map of the site of Qasr-i Abu Nasr, excavations of 1932-35



the first of these Islamic buildings [near the Achaemenid doorways] was gutted by fire. . . . Islamic pottery and bits of the broken black stone persist right down to gebel [bedrock] on the insides of these terrace walls [on the northwestern slope] and layers of ashes are traceable very low down" (Hauser, letter to Winlock, 2 April 1933). The remains of buildings beneath (or between) these terrace walls failed to produce Islamic materials but only a coarse local pottery (*BMMA* I, 44), which was identified as Sasanian only in the second season. By early April the excavation was proceeding with some 450 workmen on these northwestern slopes, finding potentially interesting architectural remains, the "Achaemenian bait," as Hauser put it, now out of the way.

The largest structure was a great vaulted hall, made of stones set in plaster. On either side of the hall massive rectangular piers formed side aisles. One end of the hall was open to the sky; the other held a central niche and a heating apparatus (*BMMA* I, 44). More intriguing, however, was the octagonal room to the northwest, with its thick walls for a dome. The short diagonal sides had elaborate plaster-decoration; some of this stucco was reconstructed as ventilator openings from the upper walls (see below, Fig. 32D; *BMMA* I, fig. 7). These decorative elements were found during the last days of the season and, as Hauser added, "have brought us out of the bottom depths of discouragement even though the work is not equal to the beautiful Sasanian plaster" (letter to Winlock, 18 April 1933).

Whatever their discouragements concerning the finds, the excavators evidently had come to terms with the problems of the site and had warmed to the challenge. With the winter rains in mind they began the second season in the last week of October 1933 by attacking the fortress on the opposite horn of the crescent. The work force began with 260 and soon increased to 300 men. Hauser states that the digging commenced on the west slope; ironically this work was encouraged by the early finds of Achaemenid (or pre-Sasanian) artifacts, objects that ultimately proved to be more false bait (Hauser and Upton, 1934; hereafter *BMMA* II, 4, 13). An intricate system of cribbing, irregular walls filled with rubble, was found to have built up this side where the sheer vertical rock of the hillock was lacking. The southern end of the hillock was a massive stone wall or bastion (see be-

low, Fig. 32A,B), behind which was a high mound often called the fire altar, or, more accurately, the podium. Repeated cuts into the podium showed that above the cribbing was a "mud brick floor, at places seven meters thick, to form a platform" (Upton 1973, 12). This podium, occupying one-sixth of the space on the fortress, gave no hint of the intended architectural superstructure (if any). "The mass of brick . . .," Hauser wrote, "disappointed us most deeply" (*BMMA* II, 4).

Digging then turned to the main area of the fortress, along the central spine of mounding from the podium to where the fortress widened on the northern end. In short order they uncovered "three well-defined streets in the confused manner of all Oriental towns of all periods. Houses and their courtyards abut each other, interlocking in solid masses. . . . a veritable labyrinth" (*BMMA* II, 6). During this digging "an exploratory cut was made across the widest section of the fortress down to native rock" (Upton 1973, 14); information on its results is now lost. In the meantime Hauser had been studying the evidence of the architecture: "There are two levels of building definitely traceable almost everywhere, often extremely difficult to disentangle, as there seems not to have been any destruction which demanded a general rebuilding but rather a gradual transformation as time necessitated repairs and reconstruction. The lower level, where it is clearly seen, is usually the better built, being stone set in plaster or good mud brick. . . . The upper level, on the contrary, is built of field stone set in mud as mortar or of layers of mud (*chine*) piled up on a footing of two or three rows of stone" (*BMMA* II, 6, fig. 10). Judging from coins found in the excavations, Hauser deduced that the "lower level may be at least as old as the Parthian period and certainly not later than the earliest of the Sasanians" (*BMMA* II, 7).

By the end of December 1933, the upper level of this central ridge had been finished. The most coherent of the house plans, and indeed the largest, was the Central House. This plan was regular but decidedly rhomboidal, prompting Hauser to note "a marked disregard of the right angle" (*BMMA* II, 6). The largest room within the Central House was a storeroom with ten huge jars sunk into the floor. Nearby was Area B, where Hauser pointed out a curious pair of long rooms, well-plastered, each with a

central curb and one with a shallow basin. In this area also was a small room with burnt debris, among which were fired mud sealings (*BMMA* II, 8, fig. 7c). A second "burnt room" found at the northern end of the fortress also yielded sealings and a bronze candlestick. It was to be the sealings, with their important stylistic and historical information, that would be acclaimed as the greatest find of the excavation (and among the first to be fully published).

By mid-February 1934 the rains had made work on the fortress difficult, so the work force was sent down the slopes of the fortress and into the amphitheater. In this area a series of cuts—long straight sondages crossing and crisscrossing hundreds of meters—was made. Within the amphitheater the cuts "showed much of the area to be town," and Cut 3 revealed two building levels, the lower of which, like the fortress, was built more solidly than the upper and larger rooms (*BMMA* II, 10–12). Since none of this architecture showed exceptional promise, all of the cuts were abandoned. The gatehouse for the fortress, located below the great stone bastion, was very likely excavated during this period. A paved ramp was found to connect the fortress with the gatehouse. Beyond the gatehouse to the south was "a long tongue of land containing a few buildings now so far gone that their character is quite uncertain" (*BMMA* II, 8). This tongue of land was called the "second defense," since the excavations traced "a brick wall four meters thick, pierced at intervals by loopholes overlooking the lower town, in the amphitheater, and further protected by frequent round towers" (*BMMA* II, 10, fig. 13). These towers differed from those defending the northern town wall, which were square, measuring 7 meters on each side.

Work resumed on the fortress during March, April, and May. During this period the excavations were extended, particularly on the northern corners of the fortress. The third season, for which information is scanty, lasted from December 1934 through April 1935. Upton states that "we resumed digging to complete the plan of the fortress" (Upton 1936; hereafter *BMMA* III, 176). These excavations seem to have included further extensions on the eastern side of the fortress and deep soundings. One of these trenches, after the removal of later walls, revealed an unusual "Plaster Building" with one room (see below, Fig. 32c). During the rainy period (December

and January) the excavators climbed the mountains and opened a number of stone tombs (or rock-built cairns). The tombs had from one to seven compartments, and most of the tombs had apparently been robbed in antiquity, with only "a few Parthian silver coins . . . and some bits of pottery, iron, and mother-of-pearl" left behind (*BMMA* III, 176). The final period of the excavation coincided with the recording of the artifacts and the completion of thousands of drawings by Wilkinson. Hauser completed the planning of the excavations, and the excavation was closed in May 1935.

The presentation of the Qasr-i Abu Nasr excavations will continue to follow the stages of the field work, beginning with the Achaemenid, or western, area, then the fortress, and finally the town, with its two defensive walls, and the tombs. This procedure will mean, however, a reverse chronological progression, treating first the Islamic remains in the western area, then the late Sasanian of the fortress, and finally the remnants of the Parthian-early Sasanian period. The historical periodization and indeed the character of the site and structures reveal that Hauser's analysis is often perceptive and essentially correct; one has the feeling that had he been granted time and resources he would have arrived at many of the following conclusions (at least the sounder ones). It is fair to say that this site did not contain the artifacts the excavators or the museum expected to find but grew to have a life and character of its own. The plans and drawings reveal the enthusiasm for the site as it became, in the absence of sensational finds, an intellectual problem of specific history rather than more general art history. It was Hauser and Wilkinson who responded to the challenge of the "new" archaeology of the 1930s and who produced the site of Qasr-i Abu Nasr for Iranian archaeology.

Historical Setting: The Excavated Coins

Much of the dating attributed to the site by the excavators is based on the explicit evidence of the coins found in the excavations. The chronological range of the site, as well as its external geographical and historical relationships, may be explored through a detailed consideration of this numismatic evidence.

The coins found in the excavations have been catalogued by Miles, though unfortunately without the historical commentary that he so brilliantly demonstrated in his treatment of the coins from the Rayy excavations (1938; 1973, 26–36). The following discussion is less a numismatic study than a suggestion of the information available through the examination of coins from an archaeological context, following a methodology developed for the Fars Hoard in the American Numismatic Society, New York (Whitcomb 1976, 161–250). The coins from Qasr-i Abu Nasr represent the single line of evidence in the frequently ambiguous world of Sasanian-early Islamic archaeology containing explicit dating and location of production. This precision of characterization, while an enviable departure from the stylistic studies of other artifact categories, is not without its problems, those specific to numismatics as well as caveats arising from interpretation of the archaeological contexts.

Over 100 coins were recorded from Qasr-i Abu Nasr; thirty-eight of them have no record of the find spot (seventeen of these are "surface finds"). The identified coins were distributed over the site: coins in the Parthian period, five from the fortress, one each from the north slope and west slope of the fortress, from Cut 3 and Cut 4 and from the mud tower below the fortress; early Sasanian coins, three from the fortress, one each from the west slope, Cut 3 and the mud tower; late Sasanian, eleven from the fortress and five from its north slope; Arab-Sasanian, eighteen from the fortress and one from the western site; Abbasid, four from the western site; later Islamic, eight from the western site and one from the mud tower. These patterns of coin locations may coincide with the periods of occupation for areas within the site. The Parthian and early Sasanian coins are few and dispersed over the fortress, its slopes, and the lower town. The Sasanian and early Islamic coins are concentrated on the fortress, the later Islamic almost completely confined to the western site. This distribution of occupation for specific periods conforms well with indications from other artifact categories, with one notable exception: a major Sasanian occupation in the western area (Chapter II). Find locations do not include stratigraphic information; this factor, with the lack of information for almost one-third of the coins, seriously detracts from the value

of distributional patterns, other than as a general and provisional indication.

Numerous implications may be derived from the quantities of identified coins. This information is summarized on the histogram (Fig. 3). This diagram is divided into one-hundred-year periods, which parallel closely historical periods, with the important exceptions of the beginning of the Sasanian period (A.D. 224) and the numismatic distinction between Arab-Sasanian and post reform (Umayyad) issues. Although the number of coins is hardly sufficient to permit precise assessments of the occupation at Qasr-i Abu Nasr, there are enough of them to yield significant general trends. The presence of coins of the Parthian and early Sasanian periods is fairly uniform. Allowing for the possibility of older coins remaining in circulation, one might place the earliest occupation from the first century B.C. to the fourth century A.D. The lack of coins dating to the century from A.D. 350 to 450 may be misleading, owing to the small number of coins recovered, the number of mint issues for this century, or other factors; nevertheless a break in the occupation of the site during this century is conceivable.

With the late Sasanian period (ca. A.D. 500–650) the number of coins increases dramatically. If more coins were in circulation, the new monetized economy seems to have been confined to the fortress. At least some of the unrecorded or surface finds may have come from other areas of the site. The same pattern is found, however, in the following period, when Arab-Sasanian issues are even more numerous and again confined to the fortress. This suggests an intensification of utilization of the fortress and abandonment of the lower town. At the same time there is a shift from silver coinage (which is the exclusive metal in the earlier period) to bronze or copper coins. Whereas bronze coins made up 15 percent of the late Sasanian issues discovered, they are some 80 percent of the Arab-Sasanian coins. This does not necessarily indicate an impoverishment of the site but seems more likely to reflect the abandonment of the silver standard and the increased use of coins in day-to-day transactions. The coinage of subsequent Islamic periods is almost exclusively in copper or bronze.

The Abbasid period (dating between A.D. 750 and 850), is represented by a few coins found only in the western area; similarly the paucity of coins for the

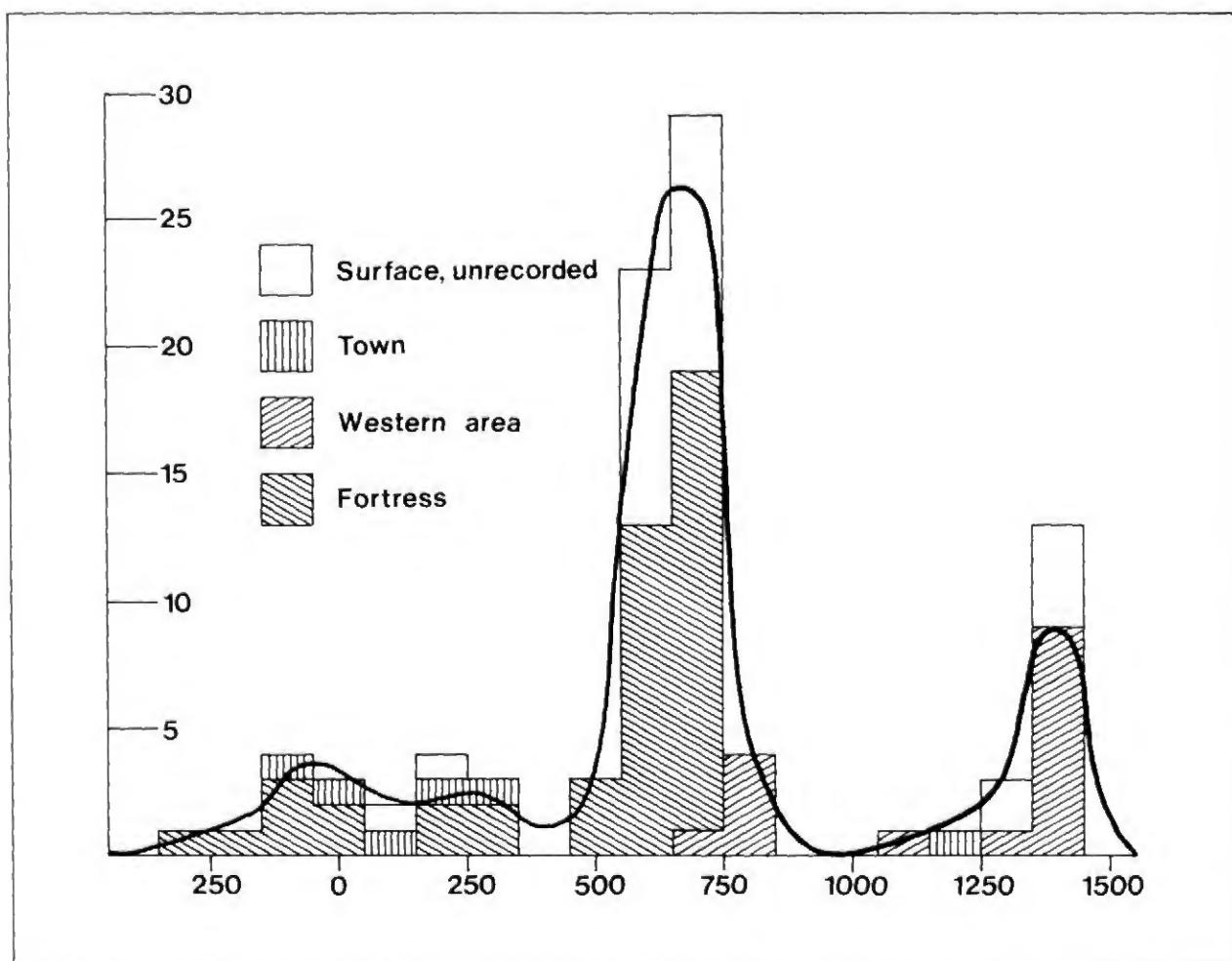


FIG. 3. Chronological and locational distribution of coins found at Qasr-i Abu Nasr

next three centuries might be partially explained by the continuation of quantities of Umayyad (Arab-Sasanian) coins in circulation. But the coins suggest a break in occupation, already reduced to the western periphery of the site, in the tenth or eleventh century. Based solely on information from excavated coins, an occupation during the Buyid period in the latter half of the tenth century seems unlikely, as does any identification of Qasr-i Abu Nasr with Kard Fana Khosrow, which incidentally had its own mint (Whitcomb 1976). The two coins of the immediate post-Buyid period are both exotic species, an eleventh-century Chinese coin and a twelfth-century gold dinar. Thereafter coins become slightly more numerous, especially in the fourteenth century, again focused on the western site. During this period al-

most half of the coins belong to the Muzaffarid dynasty.

An outline of the history of settlement at Qasr-i Abu Nasr based on the relative frequency of coins begins with the Parthian period (most likely the late Parthian period), when the fortress and lower town were occupied. The great expansion of the fortress occurred during the late Sasanian period. The relatively low percentage of bronze coins suggests that occupants of the fortress were relatively affluent, especially in comparison to the town, if occupation continued there. The concentration of a monetized settlement on the fortress continued with little or no interruption during the early Islamic period. The first major change in occupation patterns occurred with the Abbasid period, when the fortress was ap-

parently abandoned and when a small occupation began in the western site. (The coin evidence may be misleading here, given the monetary history of similar sites, as will be discussed below.) Finally, by the fourteenth century, the only occupation at Qasr-i Abu Nasr appears to have been located in the western site, presumably a transformation or reoccupation of the Abbasid site.

To use the excavated coins to establish the history of the site is obviously premature, in light of the vagaries of the monetary history of this region and the accidental nature of discovery. This second aspect of the problem of using numismatic evidence may be checked through a comparison of excavated coins from similar sites. Unfortunately the presentation of coins from sites such as Susa and Bishapur focuses on the numismatist's concerns with particular coins (issues from new mints, dates for rulers, and so on) rather than a total inventory of the excavated coinage. Even the catalogue of excavated coins from Rayy is limited to issues of that mint, the history of which was Miles's primary subject (1938, 224). Fortunately Miles also studied the coins excavated in the region of Persepolis (1959), so that coins from Istakhr and Naqsh-i Rustam, less than 40 kilometers from Qasr-i Abu Nasr, may be compared with the present corpus (Fig. 4).

Naqsh-i Rustam, less than 1 kilometer from Istakhr, is renowned as the royal necropolis of the Achaemenid dynasty, with tombs cut in the sheer rock face of the mountain. Below the tombs are Sasanian reliefs and a small fortified settlement, built around the Achaemenid tower, the Ka'aba Zardusht. Excavations around this tower revealed an occupation of the Sasanian and early Islamic periods (E. F. Schmidt 1970; work was carried out in 1936, when the Qasr-i Abu Nasr excavations were being completed). Although these excavations were much more limited than those at Qasr-i Abu Nasr, they produced almost the same number of coins. Furthermore the chronological distribution of those coins is almost identical with that of Qasr-i Abu Nasr, beginning with relatively few issues during the Parthian period, followed by a dramatic increase of late Sasanian coins and then an even greater number of Arab-Sasanian coins. Relatively few Abbasid issues were found, and the succeeding centuries are marked by only a few coins of the thirteenth and fourteenth

centuries. The replacement of silver by copper/bronze coinage is relatively the same, with the exception of more dirhems in the early Islamic period.

The coins from Istakhr offer an important comparative collection. This town was the capital of one of the five districts of Fars province and seems to have been an important ritual center for the Sasanians. It continued as a large city during the early Islamic period until its destruction during Buyid rule (Whitcomb 1979b). The excavations, also conducted by E. F. Schmidt in 1935, were limited to the area of the mosque and large soundings on other parts of the city. Most of the materials discovered belonged to the Islamic period with remarkably few definitely attributable to the Sasanian period (1939, 119-21). Considering the extent of these excavations compared to those at Qasr-i Abu Nasr, the most remarkable feature is the number of coins. On the graph presented here (Fig. 4) the Istakhr coins are ten times the number of those from the other sites—a total of 866 identifiable coins. Another anomaly of the Istakhr coins is that the Sasanian and Islamic issues are almost entirely copper or bronze (98 percent; only the Arab-Sasanian coins dip to 82 percent, roughly the same percentage as at Qasr-i Abu Nasr). The discrepancy is the result of the scarcity of silver coins at Istakhr during the late Sasanian period, when it was a provincial capital. The chronological distribution of the coins shows relatively few of the Parthian period, somewhat surprisingly few in the late Sasanian period, with twice as many in the succeeding Arab-Sasanian (early Islamic) period. The number of early Abbasid coins is enormous by comparison (a total of 537), all the more noticeable since it is followed by a sudden cessation of minting. (Miles comments on this apparently widespread phenomenon, suggesting that "it is possible that the large volume of copper struck [during the early Abbasid period] met the needs for small change of most communities throughout the East for several centuries"; 1959, 4-5.) Again there are a few coins of the thirteenth and fourteenth centuries when a village is known to have existed on the site.

The relative frequencies of coinage at Istakhr may be seen as a more or less accurate reflection of the history of the city. The rarity of Parthian and especially of Sasanian coins may be explained as an accident of archaeological discovery, but the high per-

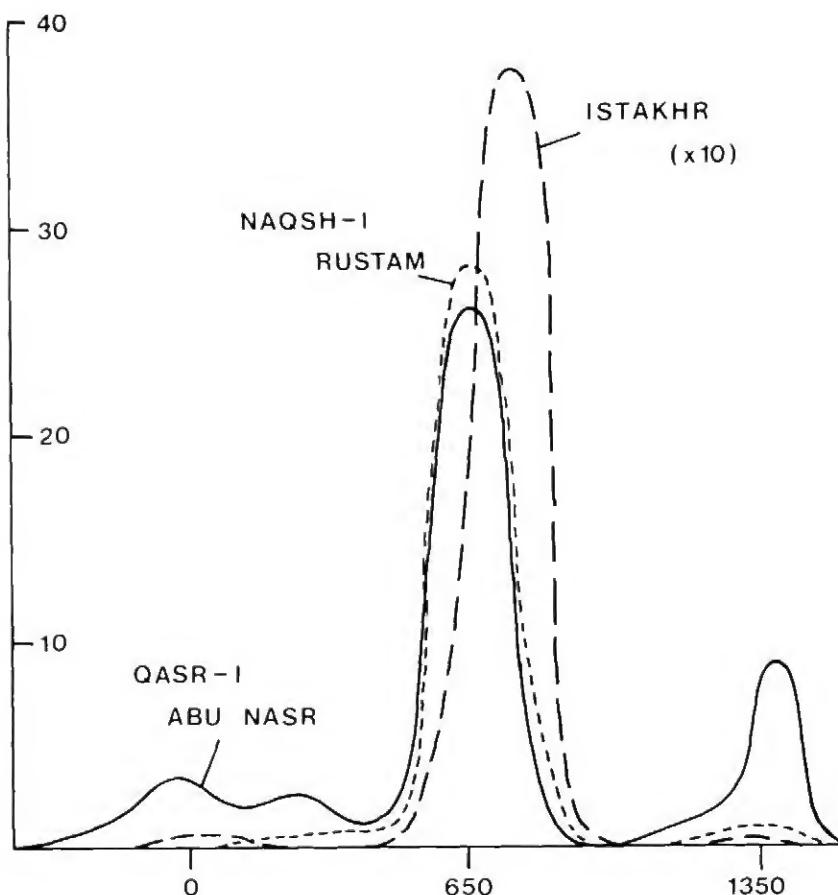


FIG. 4. Distribution of coins from excavations at Qasr-i Abu Nasr, Naqsh-i Rustam, and Istakhr

centage of Sasanian bronzes suggests that some other explanation particular to Istakhr should be sought. The close comparison of frequencies between Naqsh-i Rustam and Qasr-i Abu Nasr suggests parallel historical courses. Unfortunately there is as little external historical evidence for Naqsh-i Rustam as there is for Qasr-i Abu Nasr. When the cumulative tendency of coins is taken into account, the occupation of Naqsh-i Rustam can be seen to begin in the late Sasanian period, whereas Qasr-i Abu Nasr seems to have had a late Parthian period in addition. Although the presence of coinage is an accurate preliminary indication of the occupational history of these settlements, the relative frequency of coins is also determined by monetization of the economy (especially since these are silver rather than bronze issues) and other factors, and therefore is only a partially useful tool for historical reconstruction.

In addition to a probable chronological range for the periods of occupation of the site, excavated coins

provide another fund of information. The occurrence of mint marks, in conjunction with dating, allows an assessment of the interaction of the site with other cities and regions for each period. Their contextual juxtaposition in the excavation is the result of many possible processes, foremost of which are probably trading relationships, but which also include political (military) relationships. These coins were thus carried by merchants, soldiers, fiscal officers, and other travelers, suggesting countless variables; many assumptions must be considered in this kind of analysis, such as the continuity and periods of mint activity in each city, general minting practice (Bates 1978, 3: 2–18), and even the identity of the mint (especially for the Sasanian period). The present analysis, following an earlier study of Buyid coinage (Whitcomb 1976, 174–78), must be taken as preliminary groundwork for further numismatic studies and as evidence of general trends rather than specific mint and commercial histories. The coins used here

are divided into three periods, the late Sasanian (500–650; earlier Sasanian issues are too few and the mint names less well known), Umayyad or Arab-Sasanian issues (650–750), and early Abbasid (750–850).

The coins found at Qasr-i Abu Nasr dating to the late Sasanian period were all silver drachms (Fig. 5). The distribution of mints presents an interesting pattern, though only suggestive, given the small number of coins. The closest mints are not particularly well represented; the greatest number of coins are from the more distant centers of Susa, Rayy, and Sirjan (or perhaps Abrashahr—the reading of this mint mark is still in doubt; Miles 1973, 28 n. 33). The interaction represented here is with western “Iran” (centered on Susa, including Ctesiphon,

Nihavand, and Ram Hormozd), northern Iran (Isfahan and Rayy), and eastern Iran (Sirjan and Zaranj). This suggests a broad decentralized pattern of monetary circulation, reflective in some sense of the unification of the Sasanian empire or at least that part known as “Iran” (as opposed to “non-Iran”).

By contrast the distribution of Qasr-i Abu Nasr coinage after the Muslim conquest shows a very different pattern. The mint of Jur (the capital of Ardashir Khurrah, within which Qasr-i Abu Nasr was situated) predominates and is followed by the nearest regional centers (Bishapur, Istakhr, and Darabjird). The mints most distant from Qasr-i Abu Nasr are Basra and Zaranj, which reflect the political situation during the Umayyad period. Basra was the center of Arab population to which Fars province was

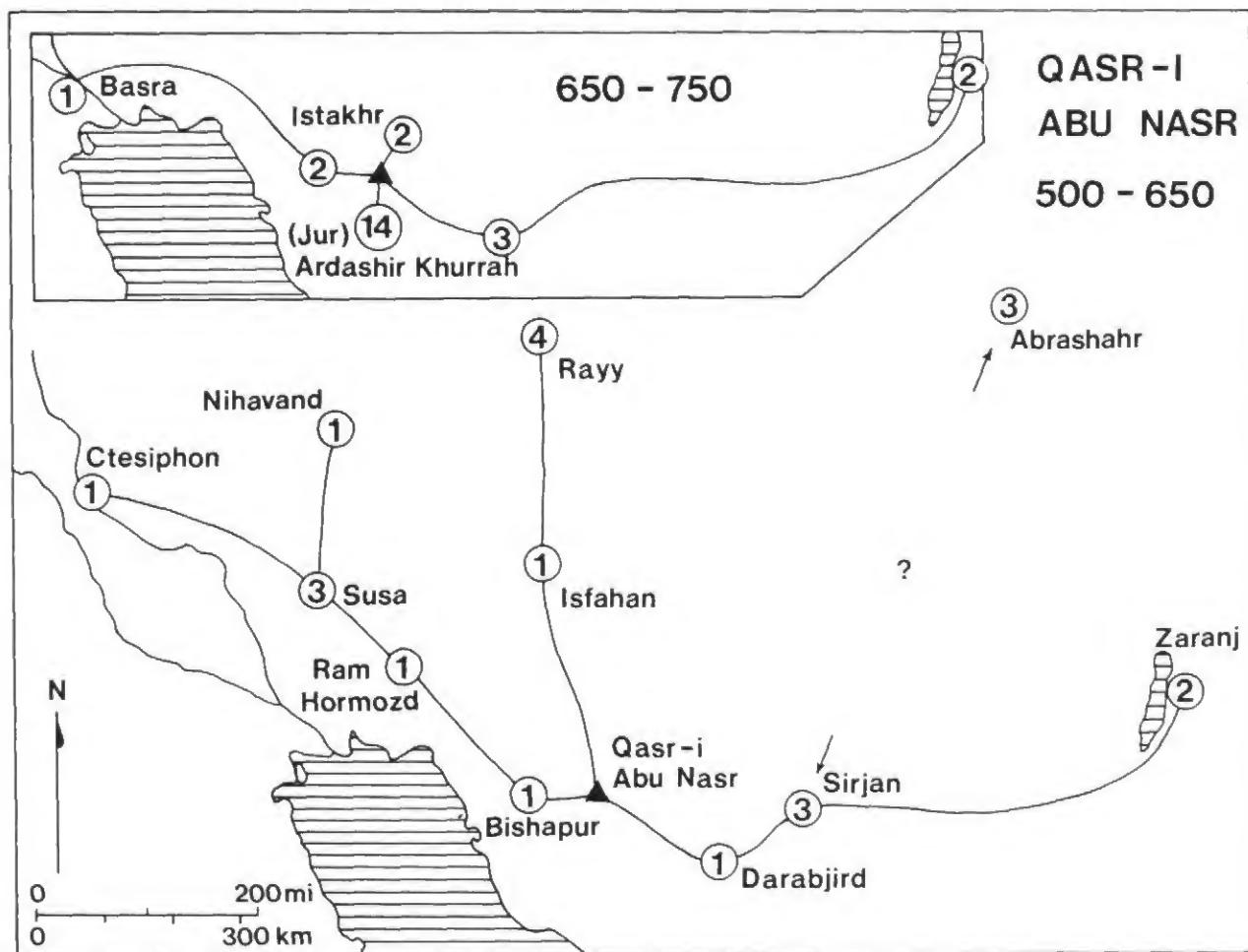


FIG. 5. Distribution of mint names on coins from Qasr-i Abu Nasr, 500–650 and 650–750

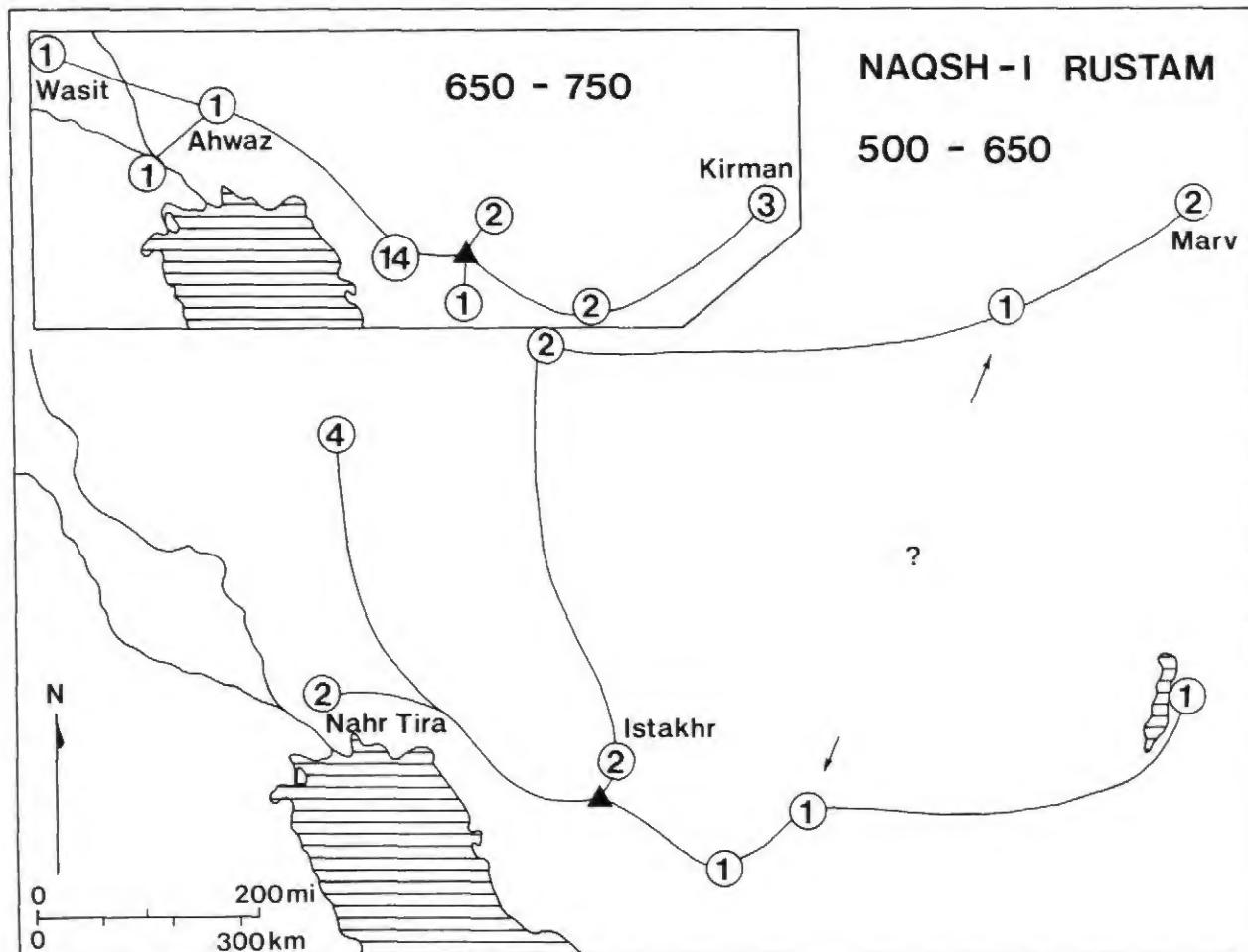


FIG. 6. Distribution of mint names on coins from Naqsh-i Rustam, 500-650 and 650-750

initially attached and it was from this city that the further conquests of India and Oman at least partially originated (perhaps via Zaranj). The increase of copper and bronze coinage, with more limited intrinsic value and therefore more limited probable range of circulation, is demonstrated in the preponderance of issues from Jur and the fact that the four silver dirhems come from Basra and Zaranj, as well as from Bishapur. This change of metal may represent some distortion; nevertheless the circulation pattern appears to have been regionally more limited, with only linear external contacts.

Given the limited number of coins involved and therefore the likelihood of distortions from chance of discovery, it is extremely fortunate that the pattern of mint distribution may be confirmed by compar-

ison with the excavations at Naqsh-i Rustam (Fig. 6). The pattern for the late Sasanian coinage is strikingly similar with nearby mints poorly represented (one of the Istakhr coins is bronze, the only such example in the coins of this collection). Western mints represented include the small mint of Nahr-Tira. Four coins from Nihavand suggest that, as with the Qasr-i Abu Nasr example, this mint had some special connection with central Fars province (perhaps reflecting the dual residence of the Karin family; Christensen 1944, 105). Again Zaranj is represented on the east, and in the north Rayy and even Marv are found (this also strengthens the possibility of Abrashahr being one of the mints). In addition to the dispersed pattern, there is some suggestion that the interaction of central Fars province is less with Ctesiphon and the

Mesopotamian plain than with the Iranian plateau, especially to the north (Nihavand, Rayy) and the eastern marches (Zaranj, Marv).

The Umayyad period at Naqsh-i Rustam repeats the regional concentration found at Qasr-i Abu Nasr, although the primary contact was with Bishapur rather than with Jur or even nearby Istakhr. Otherwise the pattern is again longitudinal from Basra, Wasit, and Ahwaz on the west, and Kirman on the east. In contrast to the situation at Qasr-i Abu Nasr, bronze coins at Naqsh-i Rustam are rare, two coming from Istakhr and one from Wasit. Thus the histories of monetary circulation at Qasr-i Abu Nasr and Naqsh-i Rustam might be expected to be closely parallel, except for the Umayyad period, when Naqsh-i Rustam was apparently more affluent.

A very different monetary history is revealed in the mint distribution of coins from the Istakhr excavations. Of the three sites considered, Istakhr had the distinction of being a mint location and central city of its own district. In spite of the assumed importance of Istakhr during the Sasanian period, relatively few Sasanian coins were found, very few of those with mint marks. Only two Istakhr issues from the late Sasanian period were found on the site, the same number as found there from the city of Jur; the only other mint represented is that of Nihavand, pointing to a connection already noted for Qasr-i Abu Nasr and Naqsh-i Rustam (this Nihavand coin is the only silver issue of the coins mentioned). During the first century of Islamic rule, most of the bronze coins are from the Istakhr mint; other bronzes

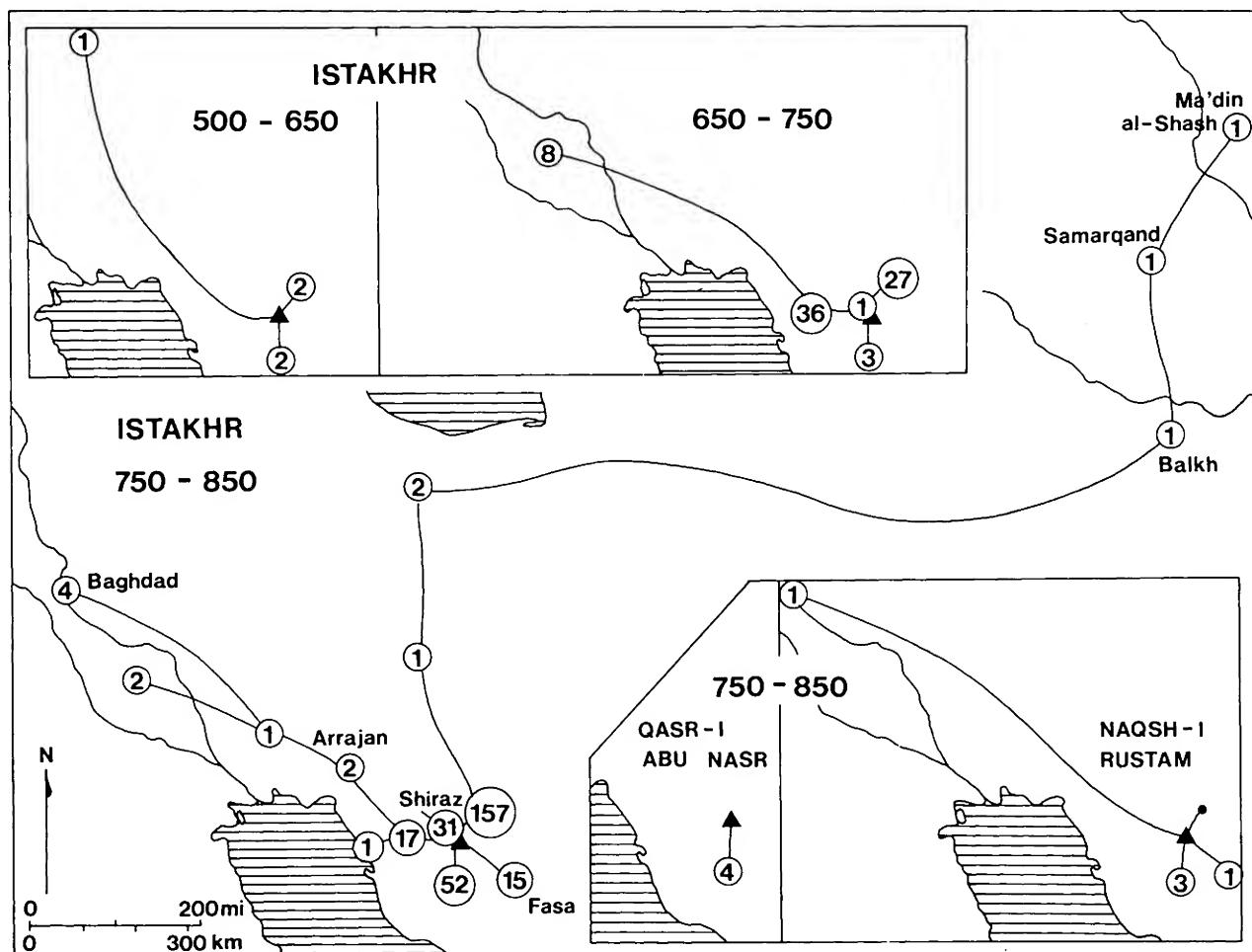


FIG. 7. Distribution of mint names on coins from Istakhr, 650–750 and 750–850, with coins from Qasr-i Abu Nasr and Istakhr, 750–850

FIG. 8 Table of coin locations, supplement to Frye, 1973

The following coins which have been published by Miles (Frye, 1973: 37–36) may now be more precisely located in terms of their archaeological context than was possible or necessary for Miles' preliminary description and catalogue.

Catalogue no.	Location	Date	Field no.	Photograph no.
70	cleaning N8	Arab-Sasanian	Sh.-65	A108-8
74	Room 23, alcove	Abbasid, 762/3 AD	Sh.-60	A108-3
75	Room 23, alcove	Abbasid, 777/8 AD	Sh.-58	A108-1
76	Room 23, alcove	Abbasid, 777/8 AD	Sh.-59	A108-2
77	Room 23	Abbasid, 777/8 AD	Sh.-61	A108-4
79	Corner NW of W19	Ilkhanid, 1264–81	Sh.-69	A108-12
82	from wall near N11	Muzaffarid, 1361–84, Shah Shuja	Sh.-72	A108-15
83	W20	Muzaffarid, Shah Shuja	Sh.-74	A108-17
84	from wall near N11	Muzaffarid, 1368–78	Sh.-71	A108-14
85	N8	Muzaffarid, 1368–78	Sh.-66	A108-9
86	N8	Muzaffarid, 1313–87	Sh.-64	A108-7
87	below level of black stone in wall	Muzaffarid, 1313–87	Sh.-63	A108-6
88	N7	Post-Mongol, late 14th century	Sh.-68	A108-11
89	NE Front near dump	Post-Mongol, late 14th century	Sh.-70	A108-13
90	W20	Post-Mongol, late 14th century	Sh.-73	A108-16
99	under edge of threshold, near fallen door	Persian, 17th–19th centuries	Sh.-62	A108-5
100	from in front of house	Persian, 17th–19th centuries	Sh.-67	A108-10
101	Rooms 18–19	Chinese, Sung dynasty 1068–77 AD	Sh.-78	A108-21

are from Jur and Shiraz (a very early example dated A.D. 747-48; Miles 1959, 47 n. 193) and five from Wasit. Silver coins are from Wasit, again illustrating the connection of this important Umayyad political center with southern Iran, and a hoard from Bishapur. Thus Istakhr seems to show a localized monetary pattern during both of these periods; while it was certainly important as a regional center, it seems to have remained economically underdeveloped.

Istakhr changed radically, or perhaps emerged, during the early Abbasid period (Fig. 7). Not only were there ten times as many coins found there as at the other sites discussed, but the range of mints is the most extensive of any examined. As would be expected, the vast majority (157) are Istakhr's own issues. The rest come from centers of Fars province (Shiraz, Bishapur, Jur, and Fasa), all bronze issues, as well as a few from Wasit, Ahwaz, and Arrajan. These bronze issues thus illustrate a regional centralization with connections in the direction of southern Iraq. Silver dirhems again illustrate the greater range of the more valuable metal; mints represented are Baghdad (the Abbasid capital), Rayy, and a series from beyond Khorasan (Balkh, Samarkand, and Ma'din al-Shash). This last series apparently repeats the relationship of southern Iran and northeastern Iran/Transoxiana.

The history of Istakhr in the Abbasid period, as implied by the range of excavated coins, strongly contrasts to that of Abbasid Qasr-i Abu Nasr, where only a few issues of Jur are present, and Naqsh-i Rustam (a few from Jur, Fasa, and one from Baghdad), which obviously did not participate in the prosperity of nearby Istakhr. Both in chronological and geographic distributions—and, as will be shown, in many other ways—Qasr-i Abu Nasr and Naqsh-i Rustam appear to be similar. In history as well as in character Istakhr is quite different, and it is all the more unfortunate that similar centers, such as Jur and Bishapur, cannot be compared using numismatic data. The preceding description has dis-

cussed interurban connections (basing the discussion on the best-known name rather than changing mint names). Circulation of coinage was on both a regional level and a more extended interregional pattern.

As mentioned at the beginning of this analysis, this movement of coins is a by-product of a variety of possible types of interaction. The 350 years treated here may be considered, in numismatic as well as political history, a period of two well-developed systems and the transition between them. It is not often that one may observe these broad historical changes from the perspective of individual sites (sites not of central importance) and still rarer to see these patterns reflected in aspects of the material culture. The coins from archaeological sites are a special, happily explicit, category of evidence. Other artifacts—whether architectural style, ceramics, glass, or even beads—also illustrate chronological and geographic distributional patterns. In the absence of written dates and mint marks, the scholar must rely on stylistic comparison of well-published corpora of data with relatively secure dating (Fig. 8).

As the reader will soon realize, this is not a study of Sasanian art or even of Sasanian architecture. Were the artifacts and monuments at Qasr-i Abu Nasr of high aesthetic quality the publication of this site report might have appeared many years earlier. The aim here is rather to set this site in its regional history and explore its characteristics in a series of hypotheses, since the current state of Sasanian archaeology will permit little further at present. The breadth of implications that may be drawn from the most humble of these artifacts is surprising. A very limited range of these possibilities is suggested in this volume; thus where a Byzantine connection may be cornered, a number from Turkmenistan may have escaped. Pursuit of such quarry should stimulate the specialist. Such evidence is not particularly abundant; one hopes that the presentation of the artifacts from Qasr-i Abu Nasr will be an important guide for future studies.



PL. I. Expedition work room at Qasr-i Abu Nasr



PL. 2. Air view of the fortress and second defense (The Oriental Institute, University of Chicago, AE-196: Mar. 30, 1936, 7:06 a.m.)



top: PL. 3. Air view of the site from the mountains looking southeast (The Oriental Institute, University of Chicago, AE-59: September 27, 1935, 7:11 a.m.)

bottom: PL. 4. Air view of the site looking northwest (The Oriental Institute, University of Chicago, AE-582: July 3, 1937, 5:25 p.m.)

CHAPTER II

The Western Area (The Achaemenid Enclosure)

The western area at Qasr-i Abu Nasr was a hill-
ock on the edge of the site, far from the mas-
sive ruins of the fortress. The monumental
Achaemenid stones with their distinctive carvings at-
tracted particular attention to this section of the site
and no doubt inspired the name Takht-i (madar-i)
Sulaiman (throne of [the mother of] Solomon), as
many Achaemenid sites were called. The interest
that brought The Metropolitan Museum of Art to
this site had also enticed an earlier excavator (pos-
sibly a nineteenth-century governor of Shiraz). Hauser
found the debris cleared away from around the
Achaemenid doorways (*BMMA* I, fig. 3), evidently
weakening and toppling all except the southwestern
doorway and destroying the foundations of possible
connecting walls (Wilkinson 1965, 342, fig. 1). The
architectural remains of what came to be called the
“Achaemenid enclosure” were limited to the peripheral
rooms (under the backdirt of the previous excava-
tions), with wall foundations preserved to 1.5 me-
ters in height. The stones used in these outer walls
included fragments of Achaemenid cornices (walls of
Room B and the north wall of Room 4), suggesting
a dating well past the original incorporation of the
Achaemenid stones as architectural elements, a sug-
gestion supported by the lack of axial orientation of
the rooms with the doorways, as noted by Hauser
(*BMMA* I, 40).

It may be interesting to note that the history of
the Achaemenid stones did not cease with the 1932
excavations. A village rose on these slopes in the
following decades, and the stones were incorpo-
rated into a village house, which apparently used at
least a few of the foundations left by the excava-
tions (Kortum 1973, 204). The Italian archaeolog-

ical mission under Tillia located a total of fourteen
Achaemenid stones left on the site and has since re-
stored the fragments to their original positions in the
reconstructions at Persepolis (Carbone 1965, 36, fig.
5). The use of architectural elements from Persepolis
at Qasr-i Abu Nasr proves conclusively that the
stones were brought to Qasr-i Abu Nasr in a post-
Achaemenid period.

Thirteenth and Fourteenth Centuries

Among the remains initially uncovered outside of the
Achaemenid enclosure were numerous Islamic burials
in an area called the “North Hump,” which was ap-
proximately the area designated “NW Front” on the
plan. Also found in this area were fragments of
tombstones and stone fragments of a cenotaph with
inscriptions in Naskhi script, unfortunately too frag-
mentary to allow precise identification or dating
(Fig. 9). The script and the finials on the cenotaph
are similar to those of the tomb of Sa’di (less than 1
kilometer west of the site) and seem to be of the thir-
teenth or fourteenth century (Herzfeld 1946, fig. 47;
Dieulafoy 1887, 429). This cemetery grew up
around the Achaemenid enclosure during or after its
last building phase, when the structure was a solitary
square building with its principal entrance on the
northeast side. The north corner of the building had
a semicircular buttress and stone paving on a two-
stepped plinth; the paving continued across in front
of the doorway to the ancillary buildings (“Door
Front East” on the plan, Fig. 10). A raised paved
step, between two square buttresses, marked the

door, which opened onto a small loggia (Locus 8) with shallow benches on either side, once presumably connected with the Achaemenid portal (now removed, although the threshold seems to have remained in place).

The central court has been denuded to the bedrock, except for a small patch of plaster. To the north of the doorway was an architectural unit consisting of five rooms; the central room (Room 5) was probably surmounted by a dome and opened onto four iwans. Two of these iwans led into small corner rooms (Rooms 1, 2, 6, 7). The plan is a common architectural unit for medieval Iran, known as the *chabar fasl*. Below the floor of Room 5 were the foundations of earlier walls and, although the three building phases described by Hauser are not readily identifiable from the extant plans and photographs (BMMA I, 43), the entryway and chahar fasl would appear to belong to the latest phase. The massive wall of the NW Front enclosed Rooms 3 and 4; Room 4 had a semicircular buttress on its inner wall implying that this was once an exterior wall. Fragments of similar buttresses were found along the southwestern wall, against which two small rooms (A, B) seem to have been late additions.

Behind the single standing Achaemenid doorway were "a series of small nichelike rooms [Rooms 14, 15, 16, 17], many of them probably covered with vaulted roofs and, in caravanserai or mosque style, open to the court" (BMMA I, 43, fig. 4). Unfortunately the essential information for this interpretation, the front walls or openings and the roofing material, was removed before the excavations. Behind these rooms was another series of rooms (Rooms 18, 19, 20) which seem to have been part of this latest structure, to judge by the traces of rebuilding evident in the photographs. In this area and in the southeast corner (Rooms 9, 10, 11, 12, 13) there is clear evidence of earlier walls, and the fragments revealed by the excavations present a confused series of rebuildings that, in the absence of descriptions of the excavations, defies organization or separation into a logical pattern. The extent of the building in the latest period is difficult to determine, because of limited excavations to the south and east (Rooms 23 and 24 appear to be earlier).

The so-called Octagonal Building is another case in point. There is a possibility that the attached

structures near Door Front East may have extended to Hauz 3 and the Octagonal Building (N11). The central room of this building is a square approximately 10 meters on each side, bounded by walls almost 3 meters thick. These walls have indications in several places that two separate walls, or a pair of walls, have been joined together; it is likely that the square room with a doorway on the southwestern side was constructed first. Subsequently a shell of walls was placed around all but a portion of the southern corner. To the south was a series of corridors and small rooms, only partially excavated. Outside the doorway were two anterooms and a pool (Hauz 3; Fig. 10). The filling of the interior corners of the square to form an octagonal room appears to have been secondary; this feature and the thick walls suggested to Hauser that the building once supported a great dome (BMMA I, 43). While this domed building could have continued as part of the late period of the western area, the evidence of the stuccos (see below, Fig. 13) and ceramics suggests that at least part of the building belonged to an earlier occupational phase.

These two building complexes, the Achaemenid enclosure and the Octagonal Building, lie along the uppermost ridge of the western area of the site. The main crest of the ridge is indicated in the plan by a broken line with arrows (Fig. 12). The general character of the western slope, west and north of these two building complexes, is a series of terrace walls bounding what Hauser described as a "hilltop" Persian garden" (BMMA I, 44). These terrace walls appear to be reused elements from earlier architectural periods, with the possible exceptions of the walls north and west of W16 and fragments near W1, which seem to follow the orientation of the NW Front wall and the domed building.

The importance of orientation in the structural remains may also be seen in the pools (Hauz 1 and 2). These pools seem to have been approached by paved walks; in the case of Hauz 2, the plan explicitly marks loose-set stones as contemporary, yet they were excavated to a depth of nearly 2 meters. The stone walkways may therefore have been parts of earlier buildings or terrace walls retaining the soil on this slope (comparison might be made with the casemate system found on the fortress; BMMA II, 4; see also Chapter III). Steps descend into the pools,

FIG. 9 Stone tomb fragments from the western area

	Location	Photograph no.
a	NW Front	A102
b	NW Front	A180
c	NW Front	
d	Door Front East	A182.1
e	NW Front	A79.1
f	NW Front	A79.2

which—were they not carefully plastered—might be mistaken for entrances to *zir zamins* (or *sardabs*, cool subterranean summer rooms) like those that have been excavated at the site of Istakhr.

Several features, by virtue of their superposition, must be included with this latest occupation of the western area. Near the western corner of the Achaemenid enclosure was a large bin, over 2 meters in diameter; other than an association with masses of sherds, there is little to indicate its purpose. The same may be said for a single mud-brick pillar standing south of Hauz 1, not far from several other ambiguous features. Hauz 1 has an attached stone enclosure (N1) and an oven (N2). The oven might have been a small kiln, but no wasters or concentrations of sherds are indicated. The massive structure beneath this oven (W19) also contained a "very curious heating apparatus, or ovens, in the walls" (BMMA I, 43). Although the building belonged to an earlier occupational phase, the juxtaposition of these features suggests that the lower ovens may have been built into the lower building at a later date.

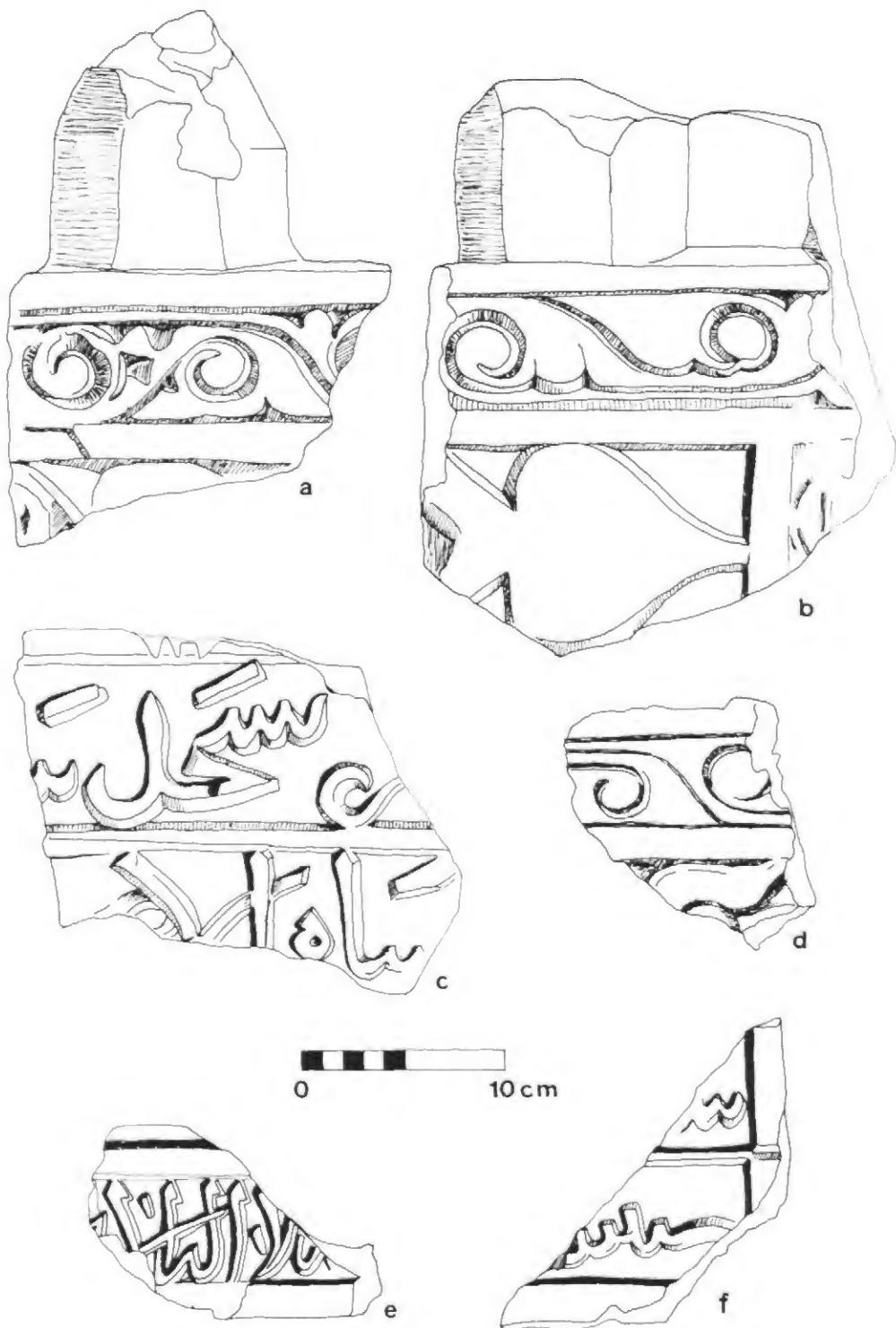
The dating of this latest period of occupation at Qasr-i Abu Nasr, as exemplified in the building complexes of the western area, is indicated by the coins and ceramics found in this area. With the exception of one late thirteenth-century Ilkhanid coin, most of the coins belong to the fourteenth century and the Muzaffarid dynasty. Two of these Muzaffarid coins come from near the Octagonal Building (see Fig. 8: 82, 84; Miles 1973, 35). This dating agrees with the evidence of the ceramic fragments, both the few Chinese celadons and porcelains (Pl. 26) and the Islamic glazed wares, as will be discussed below. The

ceramic findspots appear to be concentrated in the rooms of the Achaemenid enclosure and the NW Front and N8.

This most recent occupation of Qasr-i Abu Nasr, in the late thirteenth or fourteenth century, seems to have been a single building composed of a series of small rooms and a chahar fasl arranged around a courtyard. This structure was located in a large garden, perhaps lying opposite to a large domed building, which in size and proportions, if not in decorative elements, may have been a *turba*, or mausoleum (Herzfeld 1943, fig. 43; Grabar 1966). A possible interpretation of the complex during this period is as a *khanagah*, a shrine complex, or a *zawiyah*, a Sufi convent, with gardens and perhaps a tomb. The building of *khanagahs* became popular during this period in and around Shiraz, a prime example being that of Sa'di, located less than 1 kilometer west of Qasr-i Abu Nasr.

The fragments of a cenotaph (also datable to the fourteenth century) and the many burials offer further comparison to other shrines, including the shrine complex of Sa'di, with the conversion of the gardens into a cemetery as the area increased its reputation for sanctity. Ibn Battuta, during his visit to Shiraz in 1334, observed that, "in the vicinity of this shrine [*zawiyah*; of Sa'di] there is another shrine, with a school [*madrasa*] adjoining it. Both of these are constructed near the tomb of Shams al-Din al-Semnani, who was an amir and faqih at the same time and was buried there according to his last wishes" (Defremery and Sanguinetti 1854, 88; Gibb gives the full name of this *qadi* as Muhammad b. al-Hasan b. Abd al-Karim; 1962, 318 n. 147). Other

FIG. 9 Stone tomb fragments from the western area



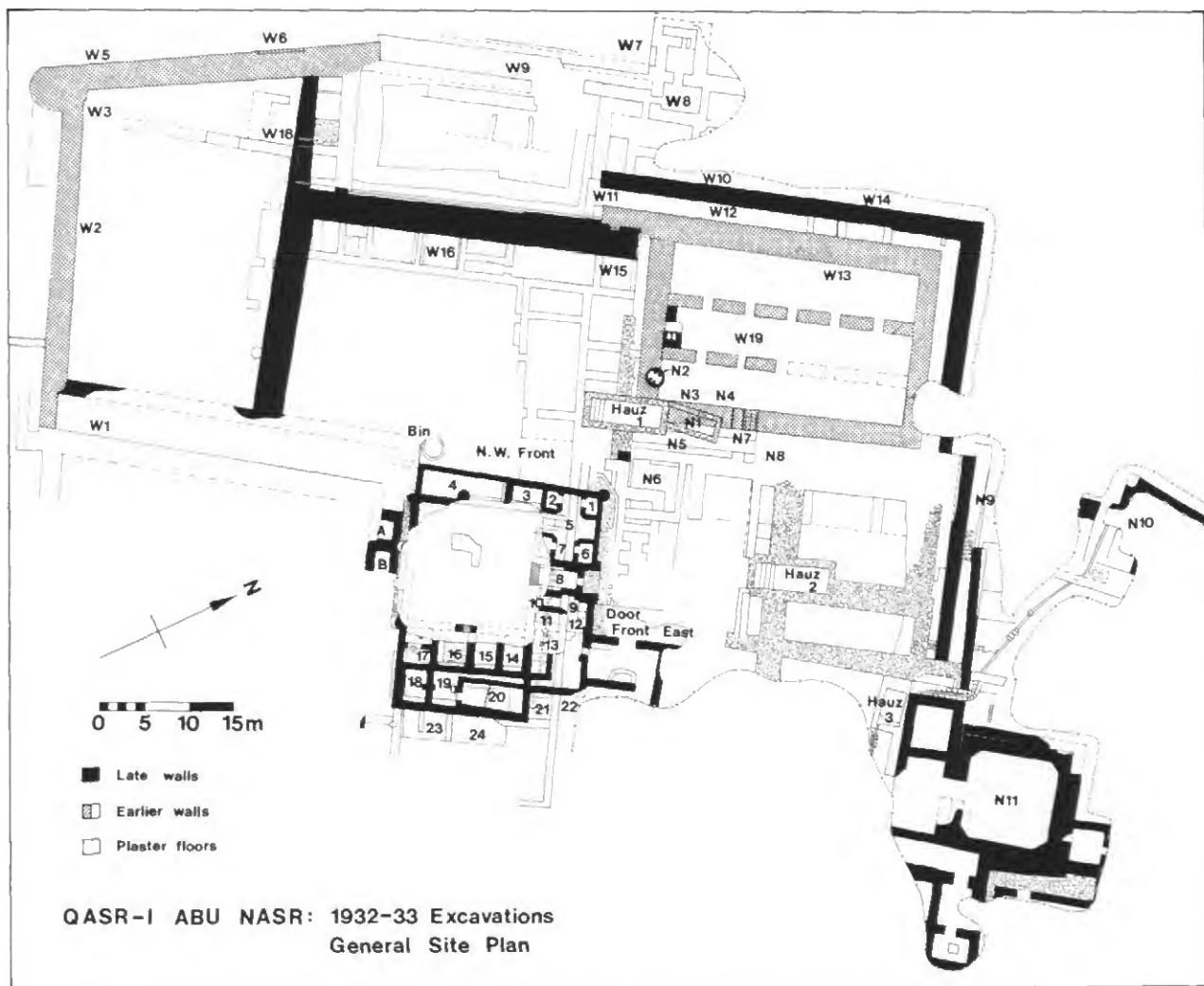


FIG. 10. Plan of the western area

than this suggestive possibility, there seems to be no evidence for the identity of the occupant of the Qasr-i Abu Nasr shrine complex.

The chahar fasl was an architectural form often included in caravanserais of the thirteenth and fourteenth centuries, such as Qal'eh-Sangui (Siroux 1949, 52, fig. 15) and Ribat Zerdun (Siroux 1949, 103, figs. 63, 64). Two other examples have recently been excavated in Iran; the first is from the rebuilding of structures at the Sasanian site of Takht-i Sulaiman in Azerbaijan. In this site a chahar fasl was superimposed over a Sasanian shrine, presumably a fire temple, during the Mongol period (possibly during the rule of Abaqa, 1265-82; E. and R.

Naumann 1969; R. Naumann 1975, fig. 3; Huff 1965, figs. 38, 41). The second example comes from the excavations of Siraf, where a building closely resembling the chahar fasl at Qasr-i Abu Nasr was uncovered at Site E (1969, 54-58, fig. 6). The building seems originally to have stood alone and was later incorporated into one corner of a courtyard. Trampled into the floor of the courtyard were coins of Ghazan (1296-1304), Abu Sa'id (1320-30) and Shah Shuja (1386/7); beyond the courtyard were glazed bowls of black under turquoise decoration, dated to the fifteenth century by the excavator (1969, 56-57, pl. vib,d), as well as Chinese celadon, stoneware, and blue-and-white porcelain. The

Siraf example is thus rather close to that of Qasr-i Abu Nasr.

There remains the curiosity of an Islamic shrine incorporating Achaemenid doorways and sculptures at Qasr-i Abu Nasr. The Salghurid atabeg of Fars, Sa'd ibn-Zangi, under whose patronage Sa'di worked, built many structures in Shiraz, including the New Mosque (Masjid-i Now), completed in 1218. This ruler also converted the tomb of Cyrus at Pasargadae into a mosque; this tomb was then known as that of the mother of Solomon (just as Qasr-i Abu Nasr was also known as the Takht-i Sulaiman). Not content with identification of Achaemenid ruins with Solomon and the placement of inscriptions to this effect, the rulers of Fars, beginning in the thirteenth and continuing into the fourteenth century, transformed a number of ancient monuments into Islamic shrines. A frequent title enjoyed by these rulers was "inheritors of the realm of Solomon," which had connotations of both earthly and spiritual glory.

This connection of Achaemenid monuments with Solomonic themes figured strongly in Sufi speculations during this period (see the excellent study by Melikian-Chirvani 1971). The inscription of Abu Ishaq ibn-Mahmud, dated 1337, at Persepolis refers to the throne of Solomon and to the great gifts of Solomon mentioned in the Koran: wisdom and justice. These gifts are contrasted with the theme of the vanity of worldly things, an idea commonly evoked by the presence of once-magnificent ruins. Further, a Muzaffarid inscription at Persepolis, dated 1370, expands this theme with reflections on the carved images and the nature of existence (Melikian-Chirvani 1971, 20-21). It concludes with a distich:

Perhaps a holy man will one day with compassion bring a prayer upon the place of dervishes.

The thirteenth and fourteenth centuries experienced the rapid growth of Sufi orders in southern Iran and numerous khanagahs were established to house the dervishes. In the course of the thirteenth century the town of Khunj, southeast of Shiraz, had an important khanagah, an outgrowth of the order of Sheikh Abu Ishaq of Kazerun (Aubin 1969, 25). The nearby town of Fal was also an important center of learning in southern Iran, and its leaders exercised an important influence in Shiraz during the period of

the last Salghurid atabegs, when the Sufi order of Abdallah-i Khafif maintained a powerful center on the eastern edge of Shiraz (Aubin 1969, 24-25). The twin towns Khunj-o-Fal, situated in the mountains behind Siraf, appear to have replaced the medieval port as a population center and center of commerce. The first sheikhs of Khunj-o-Fal were active in the construction of "qanats, buildings, mosques, madrasas, bridges and ribats" (Aubin 1969, 28). This accords well with the fifteenth-century archaeological evidence from Siraf, where the Friday mosque was reconstructed and a large shrine and a number of residential buildings were erected.

This region developed an economic strength that led in turn to a degree of political autonomy. During the rule of the Muzaffarid Shah Shuja (1364-84), Shiraz not only brought this region under firm authority but extended its political influence to Bahrain, al-Hasa, and Qais Island. This was a reaffirmation of political control over a commercial network based on the Sufi centers, the prosperity of which directly applied to the khanagahs. This mercantile base may have paralleled that of the earlier Abbasid period as a part of the eastern trade; certainly relations between India and Iran seem to have been close during this period (the *Qutb-Minar*, dated 1229, bears a reference to the realm of Solomon; Melikian-Chirvani 1971, 16-17). This mercantile aspect of the Sufi orders was of fundamental importance to the establishment and continuing prosperity of the khanagahs outside of Shiraz, such as that of Abdallah-i Khafif or that here proposed for Qasr-i Abu Nasr. The multiple functions of the khanagah as a caravanserai and object of pilgrimage, of worldly goods and attention to mystical realms, are juxtapositions not alien to Sufi thought. The great production of coinage under Shah Shuja is manifest in the frequency of these coins at Qasr-i Abu Nasr and other sites of this period. The Muzaffarids also seem to have established a mint called "Bandar," a name that may have referred to Qal'at Fehender, Pahandez, or perhaps even Qasr-i Abu Nasr in this period. This subject will be postponed until Chapter IV; for the present the pairing of a mint with a shrine seems to underline the commercial functions of the khanagah.

The study of the remains from this latest occupation of Qasr-i Abu Nasr thus introduces themes vital to the interpretation of this archaeological site. Fore-

FIG. 11 Achaemenian stone fragments

	Description	Location	Photograph no.	Accession no.
a	mortar fragment	A	F166	34.107.61
b		Achaemenid enclosure		
c		Achaemenid enclosure		
d	scale uncertain	Achaemenid enclosure		
e	black stone	Husein Ali Agha, NW corner	F165	34.107.62
f		Achaemenid enclosure		
g		Achaemenid enclosure		
h	hole for attaching fang	N enclosure wall	A272	
i	black, polished	near N10	A173	
j		Achaemenid enclosure		
k				
l		Achaemenid enclosure, SE side	A185, A40	33.175.176
m		Achaemenid enclosure	A198, A289	
n		Achaemenid enclosure, SE corner	A41-44, A192, A193	33.175.1

most is the interaction of Qasr-i Abu Nasr with the city of Shiraz, a close but complex relationship that varied immensely in the various periods of the history of these two places. Second is an interdependence of economic functions between Qasr-i Abu Nasr and Shiraz, which leads into examination of commercial and political relationships. And third is the religious aspect, which, as will be shown, is a constant feature of the site of Qasr-i Abu Nasr, for which the khanagah is only the latest manifestation. One should hasten to add at this point that this presentation is necessarily one-sided; this is not intended as a history of Shiraz, much as that might be desirable, but as an effort to interpret the archaeological remains at Qasr-i Abu Nasr and to begin to understand its complex history.

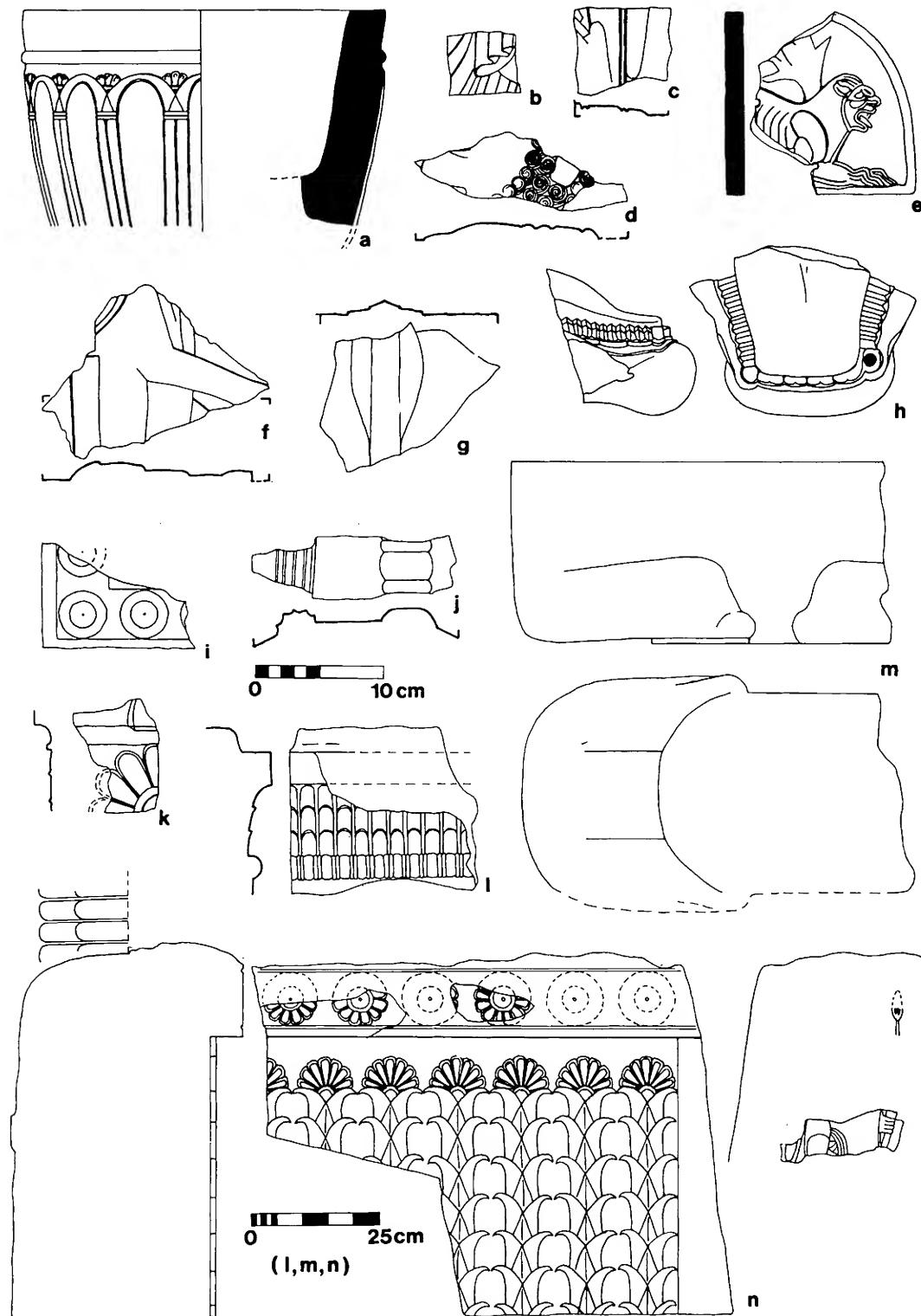
Ninth and Tenth Centuries

For the period preceding the khanagah of the thirteenth or fourteenth century, it has been suggested by both Hauser (BMMA I, 44) and Frye (1973, 6) that Qasr-i Abu Nasr is identical with the Buyid town of Kard Fana Khosrow. They note that one of the names of the great Buyid ruler, Adud al-Daula, was Abu Nasr, whence possibly the name of the site.

It was Adud al-Daula who, in the tenth century, constructed a town on the outskirts of Shiraz intended as a commercial center. Here this ruler settled craftsmen (especially textile workers) and courtiers and established an annual fair during the New Year's festival (Morony 1928b, 83). Kard Fana Khosrow had its own mint, probably to facilitate commercial transactions (Whitcomb 1976, 170).

The medieval geographers locate Kard Fana Khosrow about 1 *farsakh* (about 6 to 7 kilometers [3 1/2 to 4 miles] southeast of Shiraz; Houtum-Schindler 1888; Hinz 1970, 62). Known in later periods as the Suq al-Amir, the location of this town is said to have been near the village of Shab-i Bazar-i Adud al-Daula (or Qura al-Asafil, the "lower villages"), not far from, and perhaps finally destroyed by, the Shiraz airport (Le Strange 1905, 316 n. 1). These descriptions would place Kard Fana Khosrow in the middle of the plain quite near Qasr-i Abu Nasr. That the town was actually on the plain may be inferred from Ibn al-Balkhi's lament that this market, which once brought a yearly tax of 20,000 dinars, was completely destroyed in his day (ca. 1110) and that the land where it had stood was planted with crops (Le Strange and Nicholson 1968 [1921], 132-33). Such destruction is generally associated with the disruptions under the last Buyid rul-

FIG. II Achaemenian stone fragments



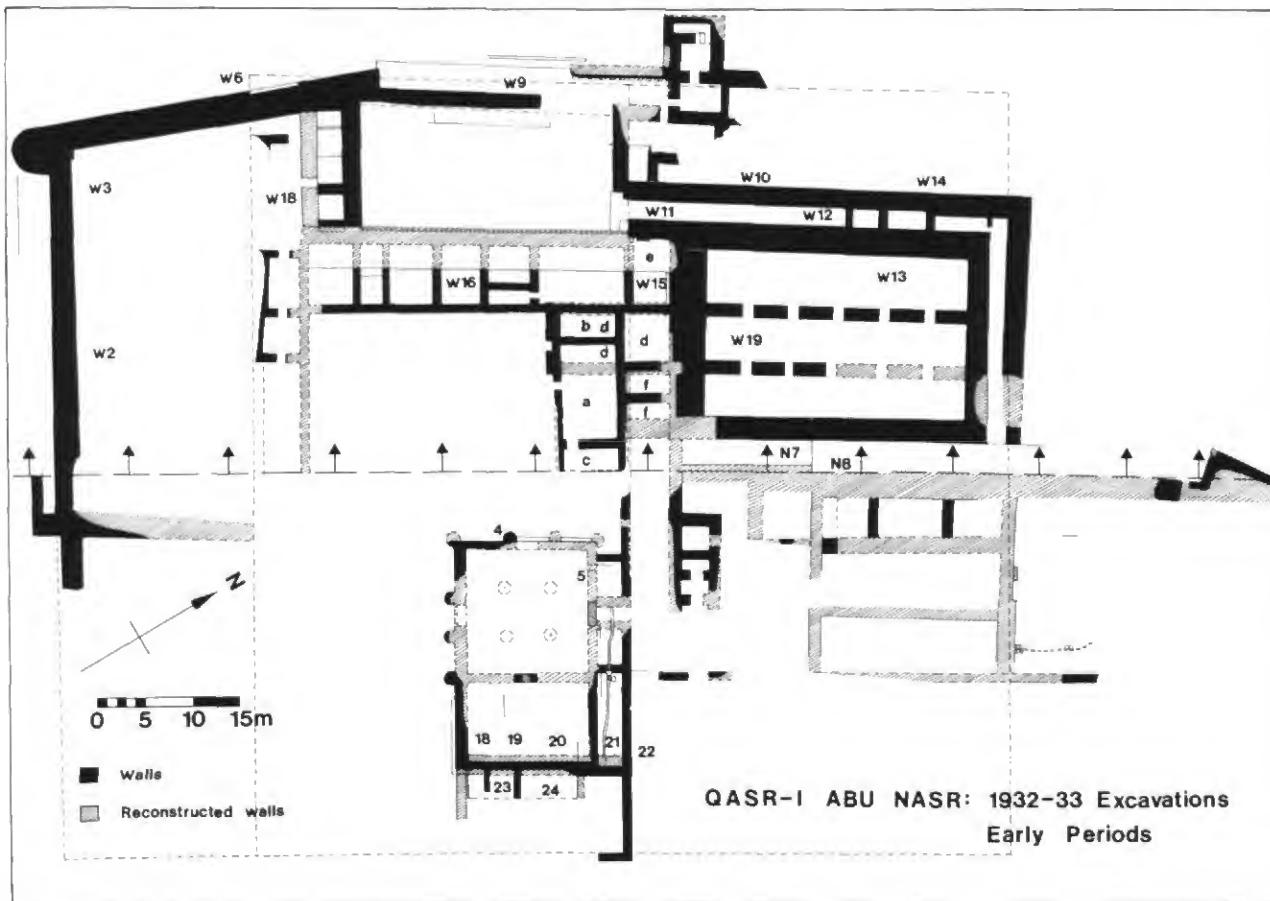


FIG. 12. Plan of the earlier phases of the western area

ers; the razing of this particular town is associated with one of their generals, Qutulmish (Ibn Zarkub-i Shirazi; Karimi 1932, 36).

There remains the question whether Qasr-i Abu Nasr may have been part of the town of Kard Fana Khosrow; one fact supporting the theory is the intensive building activity on the part of Adud al-Daula in and around Shiraz (Wiet 1972). Shams ed-Din Muqaddasi claimed that Adud al-Daula constructed a palace with 360 rooms, each room with a different decorative style, from many construction materials; this palace seems to have been constructed in association with Kard Fana Khosrow, but the relationship is uncertain; Muqaddasi no doubt exaggerated for symbolic emphasis (1967, 449). It is tempting to place at least part of this palatial complex not on the plain in the midst of the market, but upon the nearby hills overlooking the market—that is, on the site of Qasr-i Abu Nasr.

The Buyid rulers, and especially Adud al-Daula, felt a strong association with the ancient glories of the Achaemenid dynasty (no less than the Sasanians had; Busse 1973, Madelung 1969, Richter-Bernburg 1980) and had inscriptions carved on the ruins of Persepolis. These facets of the character and activity of Adud al-Daula strengthen the likelihood that this ruler transferred the Achaemenid doorways and other sculpted architectural elements from Persepolis (as originally suggested by Hauser, *BMMA* I, 44). Although it is now extremely difficult to reconstruct exactly which of the Persepolitan stones were set up at Qasr-i Abu Nasr, there were probably columns and capitals, balustrades, and lines of offering bearers and guards, in addition to the doorways (Fig. 11). The resulting architectural composition seems to be an individual room or perhaps small pavilion, "done in the style of" the ancient Persians, answering to one of the multitude of styles of Muqaddasi's palace

and more certainly to the dynastic aspirations of Adud al-Daula and the Buyids.

Consideration of the Achaemenid enclosure in terms of Kard Fana Khosrow provides a short and fairly well-defined temporal range: based on the issues of coinage and geographers' accounts, the establishment of Kard Fana Khosrow may be dated between 965 and 994. Such chronological brackets recall the impact of the excavation at Samarra in Iraq, which was occupied from 838 to 883 and was taken by a generation of Islamic archaeologists as a much-needed chronological reference point. The narrow time span is now generally acknowledged to have been too good to be true; further consideration made especially the terminal date indefensible. By the same token the ceramics and other artifacts from the Achaemenid enclosure, which on the basis of parallels from other excavations date from the ninth or tenth century, may be taken as typically late Abbasid or Buyid, but only with the greatest caution. The artifacts described below may be an accurate rendition of Buyid material culture in the late tenth century, but they should be used only as an heuristic device until other more carefully stratified materials become available.

The artifacts of the ninth or tenth century were found almost entirely in the vicinity of the Achaemenid enclosure and the problem becomes one of hypothetical reconstruction of the form of the pre-khanagah structure, the Achaemenid pavilion (Fig. 12). As was noted in the discussion of the chahar fasl, earlier walls were uncovered belonging to a rather different structural system. A long wall ran northwest-southeast through Room 5 and dividing Rooms 21 and 22; continuations of the axis formed by this wall cross the entire slope to the westernmost terrace wall (near W9). The reconstruction begins with this wall as representing an important cadastral boundary. The early Islamic land unit most commonly employed was the *jarib*, which Lassner has shown to be a square measuring 40 meters on a side (a *babl*; 1963, 228-29). Using this unit it has been possible to visualize the Islamic city of Istakhr measured out as a square of 100 *jarib* (Whitcomb 1979b, 363). There remains the question of whether this system may be pre-Islamic; the following reconstruction is certainly highly hypothetical. The area of the excavations has been divided into squares of 40 meters on a side beginning with the axial wall men-

tioned above and the crest of the hill (Fig. 12; indicated with broken lines).

The southern *jarib* contains the Achaemenid enclosure, the most certain to date to the Islamic period. The reconstruction of the Buyid pavilion is based on the locations (actual and presumed) of the Achaemenid doorways, in the center of each of the sides. The roof was supported by four columns, of which only fragmentary capitals remain. The southwest and northeast walls of the pavilion were decorated with semicircular buttresses (the best preserved, in the later room, Room 4, has already been noted). Precisely such buttresses are common features of the early Islamic buildings in and around Siraf (although buttresses with square sections became popular in this port in the later tenth century; 1969, fig. 4; Whitcomb forthcoming b). Symmetrical walls seem to have joined the northeast face of the pavilion to the axial wall; this may have been the principal entry since a drain leads into Room 21 (many of the houses at Siraf have buried drains running under the main entrance). The pavilion must have been attached to two sets of rooms (18, 19, 20, and 21) and (23, 24, and an unexcavated area to the southeast). The internal subdivisions of these two sets of rooms (if they were subdivided) have been obscured by later modifications. The pavilion and subsidiary rooms appear to have stood as a solitary unit, since there are no surface indications of other surrounding structures on the top of the hill. The view of this building from the plain must have been impressive, with the black stone doorways and flanking buttresses facing the plain above the massive terraces of the hillock.

Sixth and Seventh Centuries

The eastern *jarib* is also on the crest of the hill. Numerous wall fragments continue the orientation of the axial wall, although they are apparently separated from it. At least some of the later garden pathways may have followed the tops of these earlier walls. The interpretation of the three long rooms east of N8 as a set of triple iwans is obviously pressing the available information too far. It should be noted that ceramics of the ninth and tenth centuries were found consistently only in the area of the pavilion and immediately north of the pavilion. It is likely that the structural remains of the eastern and other *jaribs* be-

long to an earlier, pre-Islamic period; suggestions for this dating will follow the description of the setting.

Perhaps the best-preserved architectural remains were those found in the northern jarib; almost the entire jarib is a single massive building (hereafter referred to by its central locus, W19) measuring at least 20 × 30 meters. The structure is divided into three long rooms by massive piers, or long walls pierced by narrow openings. The general proportions recall some Umayyad cisterns, though no evidence from the accounts or photographs corroborates this interpretation. Given the thickness of the walls, the building was probably covered by three barrel vaults (as suggested by Hauser in *BMMA* I, 43). The structure was enclosed on the west and north sides by a narrow wall and corridor; an eastern corridor may have existed between W19 and the terrace wall of the crest of the hill. The probable entrance would have been from the southwestern side, although there is no indication on the field plans. The massive southwestern wall is somewhat uncertain, the remains being less than a meter in preserved height (*BMMA* I, 43).

On the slope of the hill next to building W19 was a series of rooms arranged apparently along three sides of a large courtyard (W16 is the northwest range of rooms [within which plaster painted blue, black, and red was found]; these formed the upper part of the west jarib). The interconnection of these rooms with the W19 building shows that more than one rebuilding took place. A hypothetical reconstruction of these building phases might be as follows: The large room *a* with an entrance off the courtyard was flanked by two smaller rooms, *b* and *c*; this ensemble was built over part of an earlier set of rooms, a long room *d* entered from the courtyard, again flanked by two smaller rooms, *e* and *f*. The proportions of the later set of rooms (*a*, *b*, *c*) seem to fit the space of the courtyard and are confined to the west jarib, while the earlier rooms (*d*, *e*, *f*) seem oriented more with the massive building W19 and the long room *d* crosses the axial wall into the west jarib.

Below building W19 and the series of rooms W16 was a lower terrace with a massive wall that marked, more or less, the outer limit of the jaribs. Near the end of the axial wall a series of casemate rooms (W7, W8; see Fig. 10) apparently formed a square defen-

sive tower. South of this tower (in the northern portion of the west jarib) was a confused mass of sloping debris and wall fragments (W9), part of the remains of a stepped mud-brick construction. It is possible that W9 may have been a sloping ramp and entrance into the town. The lower terrace wall joined a series of rooms at W18; these were mud-brick structures and seem to have been altered over several building phases. The massive terrace wall, an average of 3 meters in width, continues south and ends in a large round tower before turning up the slope of the hill to the southeast. This last section of the wall, along areas W2 and W3, marks a boundary which is 20 meters, or one-half jarib, from the axial wall. This lower terrace wall was possibly the city wall for the western part of the site, although it differs markedly from the north wall.

Whether or not the jarib system tentatively advanced here is correct, it seems evident from the remains that the western area was planned according to a cadastral system and that a specific architectural complex built in this area was subsequently modified. As mentioned above, the distribution of ninth- to tenth-century artifacts strongly precludes a Buyid source for anything but the Achaemenid enclosure and perhaps the Octagonal Building. As will be presently shown, the W19 architectural complex may best be termed "late Sasanian," and architectural comparisons may be sought on Sasanian or early Islamic sites.

An interesting, but generally superficial, set of comparisons with the architectural elements of Qasr-i Shirin near Kirmanshah may be suggested. Qasr-i Shirin was a later Sasanian palatial complex that is usually attributed to Khosrow II (591–628). Like Qasr-i Abu Nasr the complex was fundamentally organized at more than one elevation through the use of large terraces. Architectural elements used are the long, narrow corridors around individual building units, and the terrace walls, courtyards with flanking series of small rooms, and massive walls pierced by relatively narrow openings (Bell 1914, pl. 54, esp. courts N, M, V). As with other late Sasanian building complexes, some scholars have recently suggested early Islamic and even Buyid dating for these monuments (e.g., Sarvistan, Firuzabad).

A less ambiguous comparison may be made with the well-dated excavations at Siraf. The use of semi-

circular buttresses at this ninth- and tenth-century port has already been mentioned. On the elevation directly behind the lower town stood a large building complex. Most of the remains have been dated by the ceramics and rectangular buttresses to the tenth and eleventh centuries (Siraf 1974, 9). The largest of the buildings in this area measured 38 × 37 meters (i.e., slightly less than a *jarib*) and is described as a palatial residence. Although the plan is somewhat irregular, the elements of long, narrow corridors, rooms ranging around courtyards, and large terrace walls are all present; Building E is very vaguely similar to W19 and seems to have been constructed on the foundations of a building dated to the Sasanian period (based on foundation ceramics; 1974, 12, fig. 4, site K). Similarly, after the excavation of the fortress, Hauser noted: "The flat jugs and the well-formed jars with red and black slips and carved ornament on the necks and shoulders which puzzled us because they differed so greatly from the rest of the pottery, certainly Islamic, that we were turning up, we now know to be Sasanian. They were found only along the terrace walls and in the lowest levels, and these walls must have a corresponding date (BMMA II, 10)." This situation, reminiscent of that at Siraf, presents a judgmental balance that, in light of the nature of the ceramics, weighs toward a late Sasanian dating for most of these buildings on the slope.

The Octagonal Building (Fig. 10, N11) has been presented as a possible Buyid structure. This dating is called into question by the stucco decorations associated with this building. The walls were preserved only about 1 meter in height, and the interior of the octagonal room itself was a mass of fallen plaster and stucco decoration lying upon a well-plastered floor. The stucco was, to Hauser, "not equal to the beautiful Sasanian plaster" (bearing in mind that from Cresiphon and Kish); the fragments are chiefly architectural elements with denticulates (Fig. 13, o, r), beading (Fig. 13h, n), floral elements including volutelike elements (Fig. 13a–g, j), and a swastika meander (Fig. 13l). A number of these elements were pieced together to form an ornamental grill (see below, Fig. 32D; BMMA I, fig. 7). This composition seems to have no precise parallel among Sasanian stucco works (but see Keall, Leveque, and Wilson 1980, fig. 10.1, for a somewhat similar arrange-

ment); these stuccos might be seen as a general archaizing adoption of Achaemenid elements, found also at Firuzabad and not impossible in Buyid times (as the doorways illustrate). Meanders, beading, and denticulates occur at a number of Sasanian sites; in addition to Qal'eh Yazdigird (Keall, Leveque, and Wilson 1980), these include Bishapur (Ghirshman 1938, pl. 12.2), Khunj (near Kariyan; Gropp and Nadjmabadi 1970, 186, pl. 88), Ribat-i Sefid (on a fortress called Qal'eh Dukhtar; Hallier 1975, 32.3, 33) and near Darabjird (Azarnoush, 1984). In general these sites suggest an earlier rather than a later Sasanian dating, very different from stuccos at Chal Tarkhan and even those of Khirbat al-Mafjar (Thompson 1976, Hamilton 1959; but see the discussion in Kröger 1982, 196). The presence of tracery windows or ventilators in either the wall or the dome is somewhat unusual in the Iranian world; such stucco work is found in Egyptian buildings from the fifth or sixth century (Creswell 1969 [1932], 115). Coptic monasteries in the Wadi Natrun had tracery windows, one with precisely the same semicircular "scale" design as the Qasr-i Abu Nasr window (see below, Fig. 32D; Evelyn-White 1933, pl. 54B). While this influence may possibly be a result of the Sasanian domination of Egypt from 616 to 628, more general trends might be pointed out, particularly in regard to the growth of monasticism. The context of these stuccos apparently misled Kröger, who in his detailed analysis (1982, 273–74) associates the octagonal room with the pillared hall (W19), interpreting them as Zoroastrian religious structures. Such an interpretation is conceivable, but the correlation of these buildings as a single complex is decidedly difficult. The minimal character of the stuccos does not help, pointing stylistically to a period earlier than the Sasanian ceramics of the area. While their Sasanian character seems assured, there must remain the unlikely possibility that the builder of the Achaemenid pavilion added to his garden assemblage a cupola in the Sasanian style.

To return to the possible interpretations of the function of the architectural complex on the slope of the western area, one may begin with the largest structure, the W19 building. The possibility that this was a cistern has already been suggested. Another function may have been a stable. Sites throughout the Near East in the first millennium B.C. had

FIG. 13 Stucco fragments from the western area and Cut 5

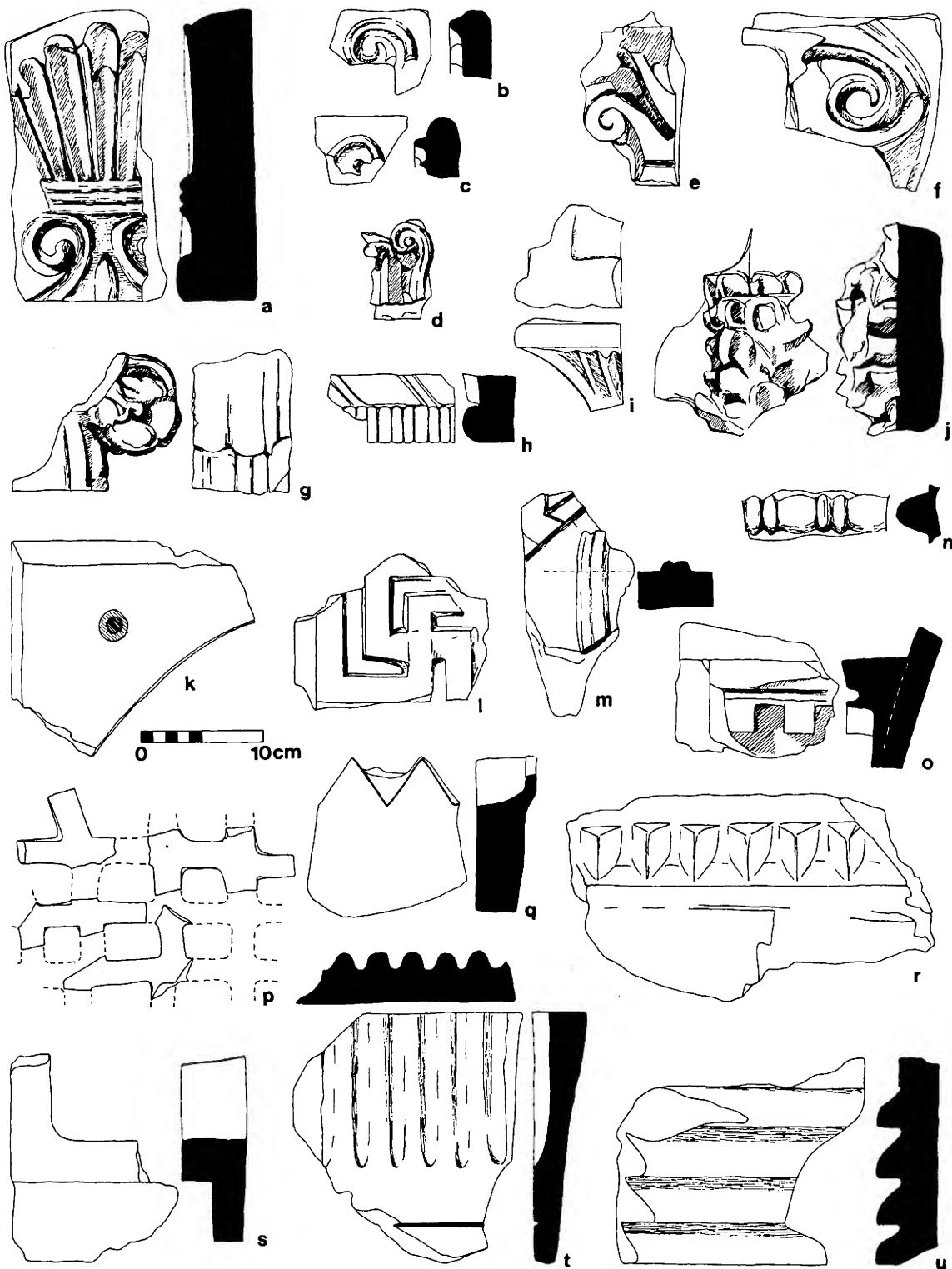
	Description	Location	Photograph no.
a		end of Room 4 on top of wall near fallen door jambs; NW Front	A181
b		N11	
c		N11	
d	relief 1.8 cm. deep	N11	
e	relief 2 cm. deep; 7 cm. thick	N11	A142
f	9 cm. thick	Cut 5	
g		Cut 5	
h		N11	
i		N11	
j	palm tree pilaster	N11	
k		N11	
l	3.5 cm. thick; relief 1 cm. deep	N11	A142
m	16 cm. thick	Cut 5	
n		N11	
o		N11	
p	3 cm. thick; back roughened	N11	A142
q		N11	
r			
s	9 cm. thick; back broken	N11	
t	6.5 cm. thick at top; back roughened	Cut 5	
u	6 cm. thick	N11	

large stable buildings (e.g., Meggido, Urartu, etc.). At the late Nabataean site of Kurnub (Mampsis) a large structure on the southwestern edge of the site had three long rooms separated by pierced walls; mangers had been placed in the openings and the side rooms were paved (Avi-Yonah and Stern 1977, 724, building XII). The building was later converted into a church. A number of closer parallels may be found in late Sasanian sites in Iraq; these are generally described as churches, such as the church at Ctesiphon (Monneret de Villard 1940, fig. 8) or a more recently discovered church at Qusair Nord (Finster and Schmidt 1976, 31, fig. 7). Both of these examples have long heavy side walls pierced by narrow entryways. Qusair Nord is 40 meters long and seems to have originally been divided into a nave and two side aisles, a plan very similar to that of W19.

This tentative comparison of the W19 building with Iraqi churches is reinforced with the consideration of the Nestorian monastery on Kharg Island,

just off the coast of Fars province (Fig. 14). This monastery was excavated by Ghirshman and published in a brief report (1960; see also the discussion in Whitehouse and Williamson 1973, 42–43). The church on Kharg Island is much more elaborate but retains the feature of the pierced walls on the sides of the nave (Ghirshman 1959; 1960, pl. 12). An oven was also found in this church, similar to the “heating apparatus” in W19. The Kharg monastery is dated from the sixth to seventh century (Fiey 1969, n. 117, where he also questions whether the affiliation is Nestorian or Syriac). The overall size and orientation of the Kharg Island and Qasr-i Abu Nasr buildings are approximately the same. More important, however, the main principles of spatial organization of the architectural elements of the monastery are strikingly similar to those followed in the buildings on the western slope. The monks’ cells on Kharg Island are not duplicated (the corresponding area at Qasr-i Abu Nasr was not excavated). Attached to the northwest side of the church on Kharg Island is a

FIG. 13 Stucco fragments from the western area and Cut 5



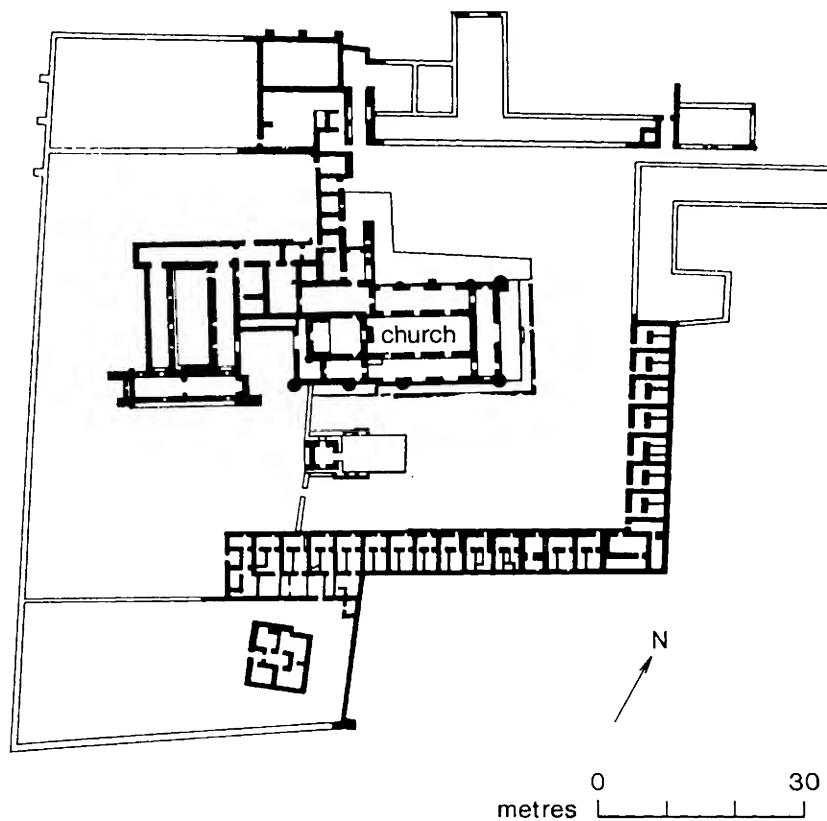


FIG. 14. Nestorian monastery on Kharg Island. After Whitehouse and Williamson 1973, fig. 9 (after Ghirshman 1960, pl. 12)

series of rooms that seem to correspond to rooms W7 and W8, the guard tower (adjacent towers are also frequent elements in Coptic monasteries). A second series of rooms compares with those of W15 and W16. Farther west of the church, as identified by Ghirshman, is the capitulary chamber, the seat of the monastery's superior; the corresponding area on Qasr-i Abu Nasr—W2, W3, W18—was left unexcavated, but the area enclosed by the terrace wall could easily have held a building of similar size. Most convincing and yet most perplexing is the parallel for the Achaemenid enclosure in the Kharg monastery. Ghirshman reproduces on his plan (but fails to describe) a small square building with multiple entrances, which was apparently built upon a platform. This building stands southeast of the church and seems to be attached to an "axial wall." This may have been a baptistry, although no such conclusion can be drawn without a careful examination of Nestorian and western church forms. Nevertheless the speculation raises the possibility that the Buyid pavilion was built upon an earlier late

Sasanian structure, the ruins of which antedated the pavilion by perhaps as many as four centuries.

The hypothesis of a Nestorian monastery at Qasr-i Abu Nasr is thus based on the interpretation of W19 building as a church and the arrangement of other architectural elements in what might, perhaps prematurely, be taken as a monastic pattern. In contrast to discoveries at the Kharg monastery, no crosses or other Christian symbols have been found at Qasr-i Abu Nasr (except for a small metal cross found on the fortress; see below, Fig. 66q). The absence of apsidal forms or a sanctuary platform seems suspicious, but perhaps blame for this lack of evidence lies with the excavations. Unfortunately no other Christian structure has been identified for Sasanian or early Islamic Iran (Fiey 1974, 295). Records of the early synods of the Persian church, especially that of A.D. 424, indicate that a number of bishoprics had been established in Fars province, mainly in the chief cities (Rev Ardashir; Istakhr; Darabjird; Siraf; Jur, or Ardashir Khurrah; Bishapur). The bishop of the Kurds was at Mas(h)kena, which Sachau locates near

Shiraz (1916, 968), although Whitehouse and Williamson place it in Kirman province (1973, 41). According to the medieval geographers, the Kurds or Zamms (tribal groups) ranged throughout southern Fars province (Whitcomb 1979a, 85–87); Shiraz is on the migratory route of several. Much of the conversion to Christianity seems to have been with these Kurds in the mountains (Labourt 1904, 152).

The foundation of monasteries as part of the church in Persia began in the mid-sixth century, and as many as sixty monasteries may have been founded (Labourt 1904, 320). In Fars province several monasteries are attested from literary sources: Deir al-Ablaq, near Kavar, between Shiraz and Firuzabad (Yaqut II, 639; IV, 315); a monastery near Istakhr founded by Rabban Giwargis (Fiey 1969, 203); one in the mountains of Arrajan, founded by Johannan of Dailam; and others "in the mountains of Fars" founded by Mar Hiob and Bar Sahde (Sachau 1916, 979–80). Nothing is known of the precise location of these monasteries, and it is possible that one may have been at Qasr-i Abu Nasr. Indeed Shiraz is said to have been the birthplace of Ma'na II, the great metropolitan of Fars, although this report is probably anachronistic (Fiey 1969, nn. 43, 201). Unfortunately there is little evidence to prove directly the existence of the Nestorian monastery at Qasr-i Abu Nasr; further research into the copious Christian records might yield such information (Morony 1978).

Ceramic Evidence

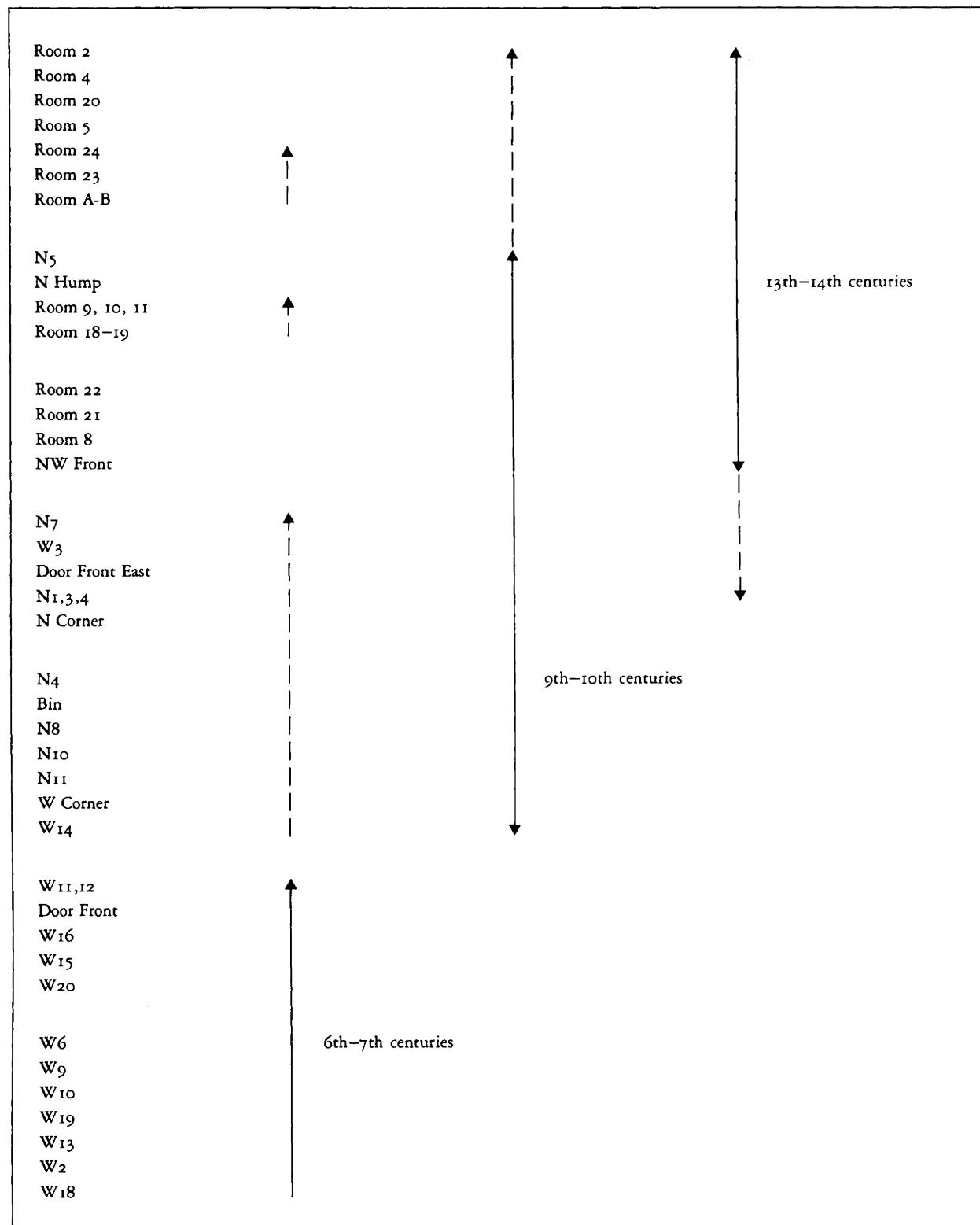
The discussion of the western area has outlined the existence of three occupation periods on the basis of architectural elements, coins, and other artifacts. These suggested periods are the Muzaffarid (thirteenth and fourteenth centuries), the Buyid (ninth and tenth centuries), and the late Sasanian (sixth to seventh century). As noted above, the excavators recognized an Islamic period (with phases based on the architecture) and a second corpus of materials that proved to be Sasanian after the subsequent excavations on the fortress. At the time of the excavations, Sasanian ceramics were almost completely unknown and undefined (see Ettinghausen 1938), and the excavation of so many Sasanian sites in the 1930s and subsequent decades did not markedly improve this

situation. Keall's article (1981) is the first serious comparative study of Sasanian ceramics and is a useful first step.

The situation is somewhat different for ceramics of the Islamic period, because of two factors: the impact of the excavations at Samarra and the existence of ample art historical studies inspired by the aesthetic qualities of these materials and their suitability for collections. The excavations at Samarra (1925) isolated a group of ceramics for the ninth century, which provided an heuristic device for defining early Abbasid material culture. Although the chronological limitations are recognized as less certain than originally thought, the usefulness of the publication has not diminished, providing a basis for subsequent discussions, such as those stemming from the work at Siraf (1979). The predominance of art historical typologies is more evident in the thirteenth- and fourteenth-century materials, where no corresponding excavations have existed. The virtues of such typologies are evident in the monumental studies by Lane (1947, 1957) and such procedures were used for ordering the ceramic corpus for the Qasr-i Abu Nasr fortress. Until careful stratigraphic excavations provide an alternative approach, stylistic analysis is the only dating tool available to scholars.

While the large corpus of ceramics from the fortress necessitated an art historical typology, the smaller corpus from the western area with its careful recording in relatively limited loci suggested another approach. The three distinct periods of occupation allow a seriation of the artifacts; this technique posits the probable chronological association of artifacts found together and the gradual change in style and specific attributes over time. Seriation has been most fully developed in American archaeology (Ford 1962; Dunnell 1970), where quantification is possible on small short-lived sites. Applications have been attempted on Islamic materials from Arabia, at al-Hasa (Whitcomb 1978) and the Hadhramaut (Whitcomb forthcoming a). Location controls and quantification have been lacking, but the technique offers a way to begin associations of unglazed with glazed ceramics and to project cultural, rather than aesthetic, changes over time. The ultimate aim, still frustratingly remote, is an understanding of the role of ceramic artifacts—both the everyday utilitarian objects and the finer, more artistic glazed

FIG. 15 Seriation sequence for ceramics in the western area



products—in Sasanian and Islamic culture. From this point of view typologies are arbitrary analytic devices that may or may not have had significance for the cultures involved.

This seriation of the ceramics of the western area can claim only a modest success. The process, just barely manageable by hand (without the aid of a computer), involves noting the recurrence of formal attributes in the various loci, then ordering the loci to obtain a "best fit" of the greatest number of shared forms. In a site with continuous occupation this process should produce a gradual stylistic change. In the western area, the three distinct periods and lack of stratigraphic control have resulted in an ordering of loci combining real groupings of materials with admixtures from earlier periods (Fig. 15). The forms were then grouped according to locational recurrences as well as stylistic attributes. (It should be noted that this procedure may select for functional areas as well as chronological distinctions.) The result is a hypothetical structure for dating all the ceramics, which is probably better than guess-work but less firm than results obtained from archaeological testing.

The presentation of the ceramics from the western area gives the locus of the drawn example, a description of the piece (with photographs and Metropolitan Museum accession number), and recurrences within the seriation. All the artifacts with Metropolitan Museum accession numbers were drawn full-scale from the original; other artifacts were drawn, usually at reduced scale, in the field by Wilkinson. (Comparison of Wilkinson's field drawings for pieces in the Metropolitan Museum shows an amazing accuracy and sensitivity in the drawings of this gifted artist.) The minimal descriptions of ware and surface treatment lack scientific designations (Munsell color notations; size/density of temper). Much further information may be derived in the future from technological analysis of these ceramics, particularly when comparative materials become available from other sites.

The following description of these ceramics includes comparanda from a variety of Sasanian and Islamic sites, mainly in Iran. It may be useful to begin, however, with a note on the ceramic evidence from Susa, an important center in Khuzistan during these periods and intensively excavated for many dec-

ades. Serious examination of the materials from the Islamic levels, recovered during recent excavations of the eastern Apadana in conjunction with those found earlier has been undertaken by Kervran (1977). For the first time a stratigraphic succession of discrete loci has been recovered in an extremely difficult site with only fragmentary architecture and frequent pits. A framework for dating is provided by the coins discovered: Level IV: before 650; Level III: 650–750; Level II: 750–825; Level I: 825–75; Level 0: 875–1000 (1977, 76–77, 88–90). This work greatly improves earlier periodizations of Islamic Susa (Lacam 1950; Rosen-Ayalon 1974), especially since it alone considers a late Sasanian occupation (Level IV; the Sasanian materials are currently being prepared by R. Boucharat). The treatment by Kervran retains an art historical cyclic orientation with periods of innovations (Level III) and decline (Level 0) and an apogee (Level I), where the impact of the Samarran dates is still felt.

Unfortunately the Qasr-i Abu Nasr periods seem to fall before and after this sequence from Susa, with possible points of comparison in the two periods where Kervran's stratigraphic evidence is the weakest. The late Sasanian materials (Level IV) offer so few parallels that they seem to imply separate traditions in Fars and Khuzistan. The greatest number of parallels occurs in Level I at Susa, the so-called Samarran period. The glazed vessels of this period at Qasr-i Abu Nasr are often repaired with iron staples, implying a rarity value and long utilization, and were found in or near the main building, suggesting a secondary deposition after the original use of the building. Further, the western area includes a type of sgraffiato decoration that does not seem to appear at Susa until the eleventh century (1974, 35). These factors suggest that the Qasr-i Abu Nasr parallels may be confidently dated to after 950, although this conclusion need not disturb the dating at Susa. The state of study of these ceramics can be improved only with further corpora of stratigraphically excavated materials; the ceramics from Siraf, for example, will be an important addition when they are published. For the present the full publication of the ceramic corpus at Qasr-i Abu Nasr, assisted by tentative evidence derived from the seriation technique, allows chronological and functional inventory for artifacts in this medium in central Fars province.

FIG. 16 Jars and juglets

	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	orange ware, red slip, large grit temper	W ₁₂	A122.1	33.175.67	A,B-N Hump . . . W ₁₁ -W ₁₂
b	greenish cream ware, grit temper	W _{18-i}	A124	34.107.43	W ₁₈
c	gray ware, black burnished slip, grit temper	W ₁₈	A279	34.107.21	W ₁₀ -W ₂ -W ₁₈
d	gray ware, black slip, large grit temper	Room 23, alcove	A126.2	33.175.69	5-23-22 . . . W ₁₀ -W ₁₉
e	gray ware, black burnished slip, grit temper	Room 23, alcove	A77	33.175.7	23-22
f	buff ware, buff slip	W _{13-i}	A280.2		W ₁₅ -N9-W ₉ - W ₁₃ -W ₁₈
g	orange ware, cream slip, heavy chaff and grit temper	W ₂	A88.4	34.107.10	W ₉ -W ₁₉
h	buff-tan ware, large black grit temper	W ₃	A129.1	33.175.72	W ₃ -W ₉ -W ₂

The first series of ceramics is large jars and juglets, all of which appear to be Sasanian or related wares early in the Qasr-i Abu Nasr sequence (Fig. 16). Two jugs (Figs. 16a, c) have either red or black slips with a high burnish; the rims find parallels in Sasanian Mesopotamia (Mahuz 1970-71, 46) and at Siraf (1971, Xa) and are clearly related to the blue-green glazed vessels. Two vessels (Figs. 16d, e) also have black burnished slips with an incised decoration (found at Qal-eh Dukhtar 1976, 6c; Pasargadae, 124.8; Istakhr; Susa 1954, 27.1266; and Samarra 1925, 43). The decoration and the fluting on the first jug (Fig. 16a) are strongly reminiscent of "Sasanian" metal vessels (Melikian-Chirvani 1974, 3-5). The smaller, rather heavy juglet (Fig. 16b) is clearly an imitation of a Sasanian ewer with its horizontal ribbing. The overall proportions of the Sasanian ewer may have inspired the rather squat, flat-bottomed juglets (Figs. 16f, g, h); this class of juglets has parallels from Ctesiphon (Choche, 141) and in early strata of pits at Istakhr (GL45 pit 3, IL56 pit 1g). The occurrence of these vessels is confined to the west loci at Qasr-i Abu Nasr, with the exception of three jugs (Figs. 16a, d, e), which were

also found on the periphery of the Achaemenid enclosure, in Rooms 22 and 23.

These find spots are repeated for the jars and cooking pots in Rooms 18, 19, 21, 22, and 24 (Fig. 17). The two-handled jar (Fig. 17a) is a common early Islamic type found at Istakhr (HL76 pit 4g), Naqsh-i Rustam (1970, 29.7) and Pasargadae (124.9). Two vessels (Figs. 17b, c) share similar proportions and red-brown wash on the upper portion; they occur in the same archaeological sites as the two-handled jar, with the addition of Siraf (1971, Xd). As for the round cooking pots (Figs. 17d, e, f, g), those with flat bottoms appear to be earlier, a suspicion confirmed in the examples from Istakhr, where round bases are associated with combed and molded decoration (GL15 pit 2b), from Qal-eh Dukhtar (1976, 6a, b), and, more tenuously, from sites along the Persian Gulf (e.g., Julfar, 14.51). Only one type of pot is found near the Achaemenid enclosure, a location suggesting an early Islamic type (Fig. 17g). The final drawing (Fig. 17h) is a reconstruction from one spout, once attached to the base of a round pot. Examples of such vessels with twin basal spouts have been thought to be Seleucid (Ettinghausen 1938,

FIG. 16 Jars and juglets

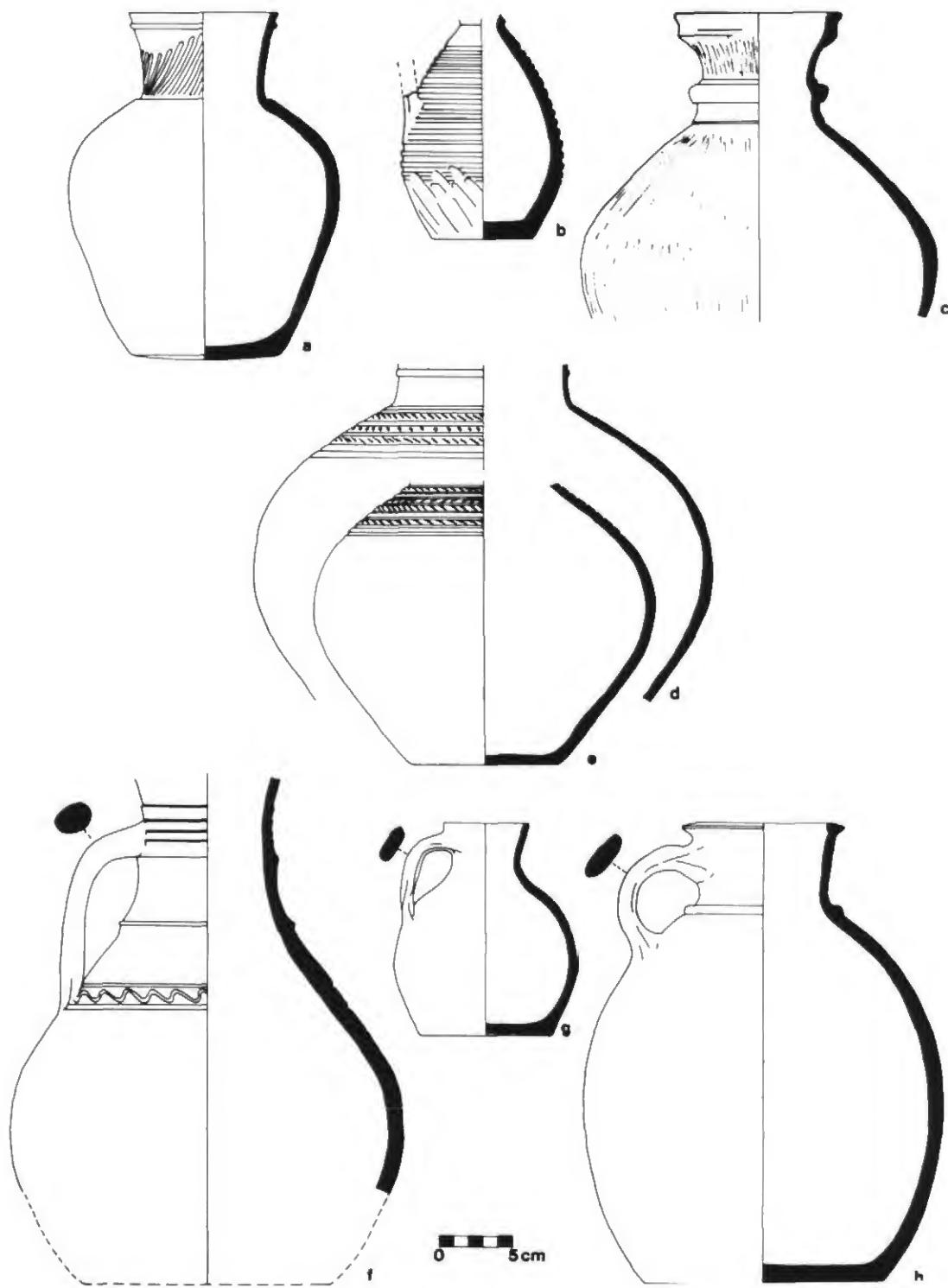


FIG. 17 Pots

	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	orange ware, orange-cream surface, grit temper	W18-0	A71.4, A85	33.175.4	18-19-22 . . . W6-W18
b	red ware, buff slip with red paint, chaff and grit temper	Room 24	A178.2	34.107.20	4-24-18-19-21
c	cream ware, brown paint on interior and exterior	W18	A276.2	34.107.19	W15-W9-W18
d	greenish cream ware, large black grits	W18	A135.3	33.175.81	W18
e	greenish gray ware, brown slip on exterior	W3			W3
f	black, burnt ware	W13-i	A115.3		W13-W18
g	brown-gray ware, heavy grit temper	outside (18-19)	A72	34.107.31	24-18-19-22-8 . . . W3-W11-W12- W9-W10- W2-W18
h	pink ware	W14			W14

220; Pasargadae, 114.8); however, metal ewers with Sasanian dancers in relief also occasionally bear twin spouts (Godard 1938, 199; Vanden Berghe 1966, 6c, d; see Haerinck 1980 for a general survey of such vessels).

Cooking pots and jars in the next figure are entirely from the vicinity of the Achaemenid enclosure, particularly from Rooms 21, 22, 23, 24. Many vessels from these rooms were found *in situ*, and often unbroken, suggesting they are contemporary with the last occupation of these rooms. The most distinctive shape is perhaps a type of cooking pot with a flat base and straight sides (Fig. 18g). The shape may well derive from "steatite" cooking vessels. Parallels are recorded from a wide geographical range, Abu Sarifa (5n), Oman (10t), Bahrain (25a, b), and Nishapur (1973, 350.88), during the ninth and tenth centuries. Vessels such as Figs. 18k, l, with distinctive triangular lug handles, belonging to the same period, are found in Samarra (1925, 65), Susa (1972a, 59.6; 1977, 32.9; 1979a, 65.2), Istakhr (DF85 pit 1; GL15 pit 4g) and also Pasargadae (118.33); on the other hand, examples from Siraf and Julfar have been dated to a later period (ca. fifteenth century), pointing to the danger of relying on single at-

tributes. These same rooms contained, along with these early Islamic cooking vessels, storage jars (Figs. 18i, j; both examples are approximately the same size, the latter drawn at half scale). Storage jars are considered more fully in the fortress series in Chapter III.

A large class of vessels is introduced in the next group—the juglets or small jugs characteristic of Sasanian-early Islamic sites throughout the Near East (Fig. 19). In this case the seriation technique seems to have produced a clear division: the juglets and jars with decorative elements consisting of a single comb-incipised band on the shoulder and a ring marking the juncture of the shoulder and neck form a discrete type. This type occurs only in western loci (with single stray examples from Rooms 22, 23). Comparative examples from Istakhr (HE02 pit 2), Naqsh-i Rustam (1970, 29.4, 5), and Siraf (1971, Xb) may be considered late Sasanian; closely related juglets, often with higher necks in proportion to the vessel body, are found at Susa (1977, 26.8), Kufa (14), and Nishapur (1973, 297.10) and may be slightly later. Most examples of the type at Qasr-i Abu Nasr have double handles, the most distinctive of which (Fig. 19a, b) bear inscriptions in black ink. Small juglets

FIG. 17 Pots

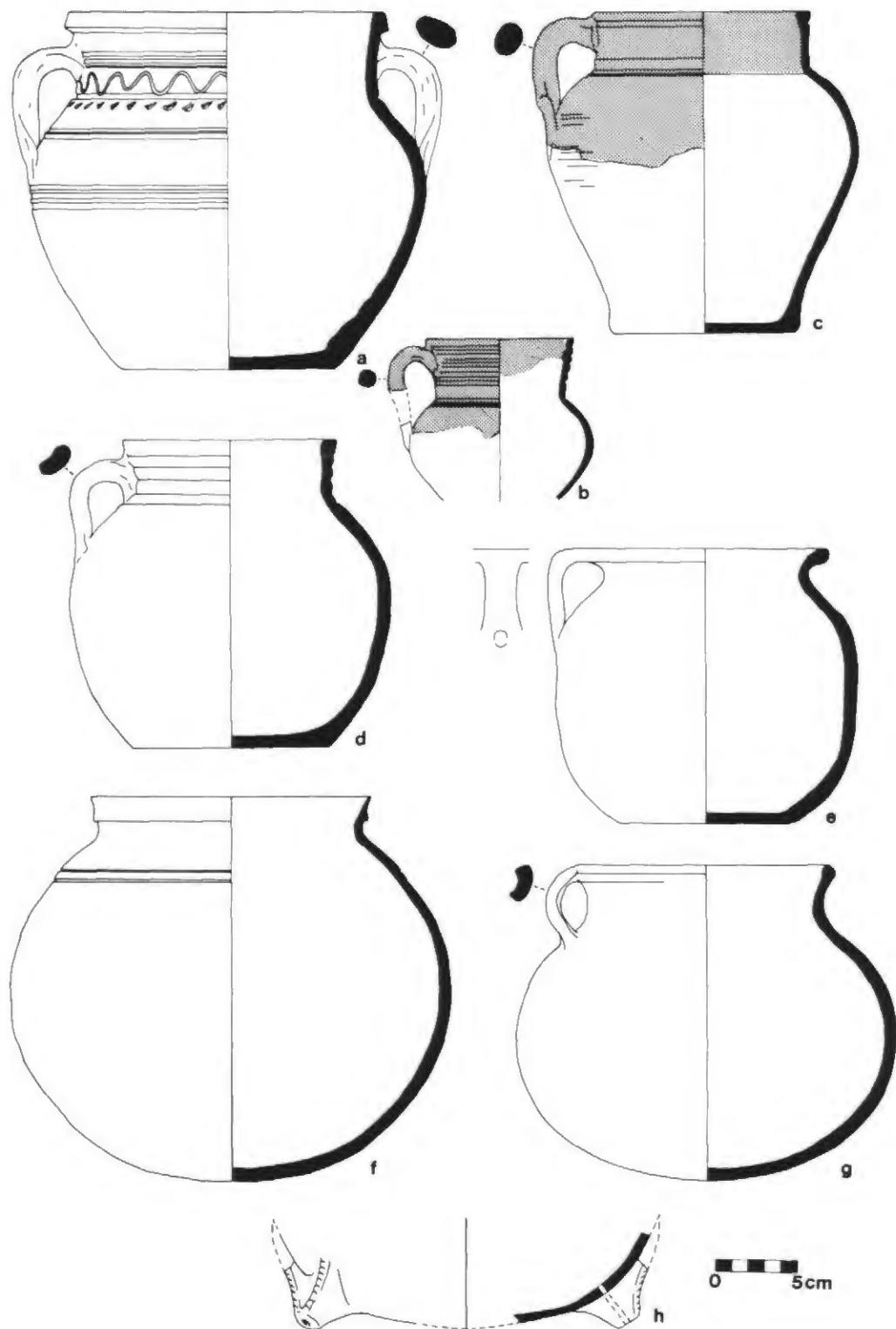


FIG. 18 Large jars

	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	pink ware, white slip, green glaze	N Hump, N			23-N Hump-22
b	red ware, red slip, grit temper	Room 22			22
c	yellow ware, blue-green glaze	miscellaneous			
d	red ware, red slip on exterior, grit temper	Room 22			5-22-21
e	red ware	Door Front East			Door Front East
f	buff ware, white slip, black paint on exterior	Room 24			24
g	gray ware, heavy grit temper	Room 23	A91.3	34.107.14	23-NW Front
h	black ware, heavy grit temper	Room 23	A144	34.107.73	23
i	greenish buff ware	Room 22	A177		22
j	buff ware, brown slip (?), grit temper	Room 18-19			18-19
k	red ware, fire-blackened	Room 24			5-24-23
l	orange-red ware, burnished red slip	Room 20	A73	33.175.5	20-24-18-19-21-N1,3,4

in this form were found at Istakhr (HL76 pit 4g), Siraf (1971, Xc), and Susa (1928, 5.41a; 1974a, 236-38); an inscribed juglet similar to a one-handled type at Qasr-i Abu Nasr (Fig. 19j) comes from southern Iraq (Goetz 1946, fig. 9). This Iraqi vessel is said to bear a Mandeean inscription and is thus reminiscent of the tradition of inscribed bowls as early as the Achaemenid period (Persepolis). The writing on the two Qasr-i Abu Nasr juglets is clearly Arabic, but in a cursive script that may derive from Pahlavi cursive writing. The writing is difficult to decipher but appears to be repetitions of similar phrases with what seems a *bismillah* (in the name of God . . .), a pattern that again recalls the apotropaic writings on earlier bowls. Inked inscriptions on vessels (not ostraka) are published from Susa (1974a, 236-39) and from Samarra (1925, 182-87).

Another group of juglets and jugs (Fig. 20) is clearly separate from those previously discussed, a distinction probably at least partly chronological. The comb-incised decoration has become more elaborate, with multiple shoulder bands, wavy bands, and

in the case of a one-handled type (Fig. 20i) complex designs. The necks are higher and horizontally rilled. Similar juglets are common at Istakhr (GL15 pit 1e, GE92, GL15 pit 2, HL76 pit 41), where they occur together with so-called tin-glazed bowls. A similar glazing, turquoise on a red body, is found on a spouted juglet (Fig. 20a) and is closely paralleled at Istakhr (GL15 pit 1b), as are the comb-decorated spouted juglets (Figs. 20e, f). Comb decoration in early Islamic contexts has a broader range: Oman (6w, x, 10d), Susa (1974a, 9), Abu Sarifa (10x) and Nishapur (1973, 310.62). These juglets occur in the rooms of the Achaemenid enclosure (see Fig. 10: Rooms 18-19, 21, 22A, 22B, 23, 24) and immediately north of this building (N1, 3, 4, N7, and NW Front).

Associated with comb-decorated juglets are larger jars with incised decoration. These vessels often have three handles and rocker patterns of decoration. Some elements, such as the turban handles (Fig. 20d), suggest a slightly later date (moving into the tenth and eleventh centuries, rather than the ninth).

FIG. 18 Large jars

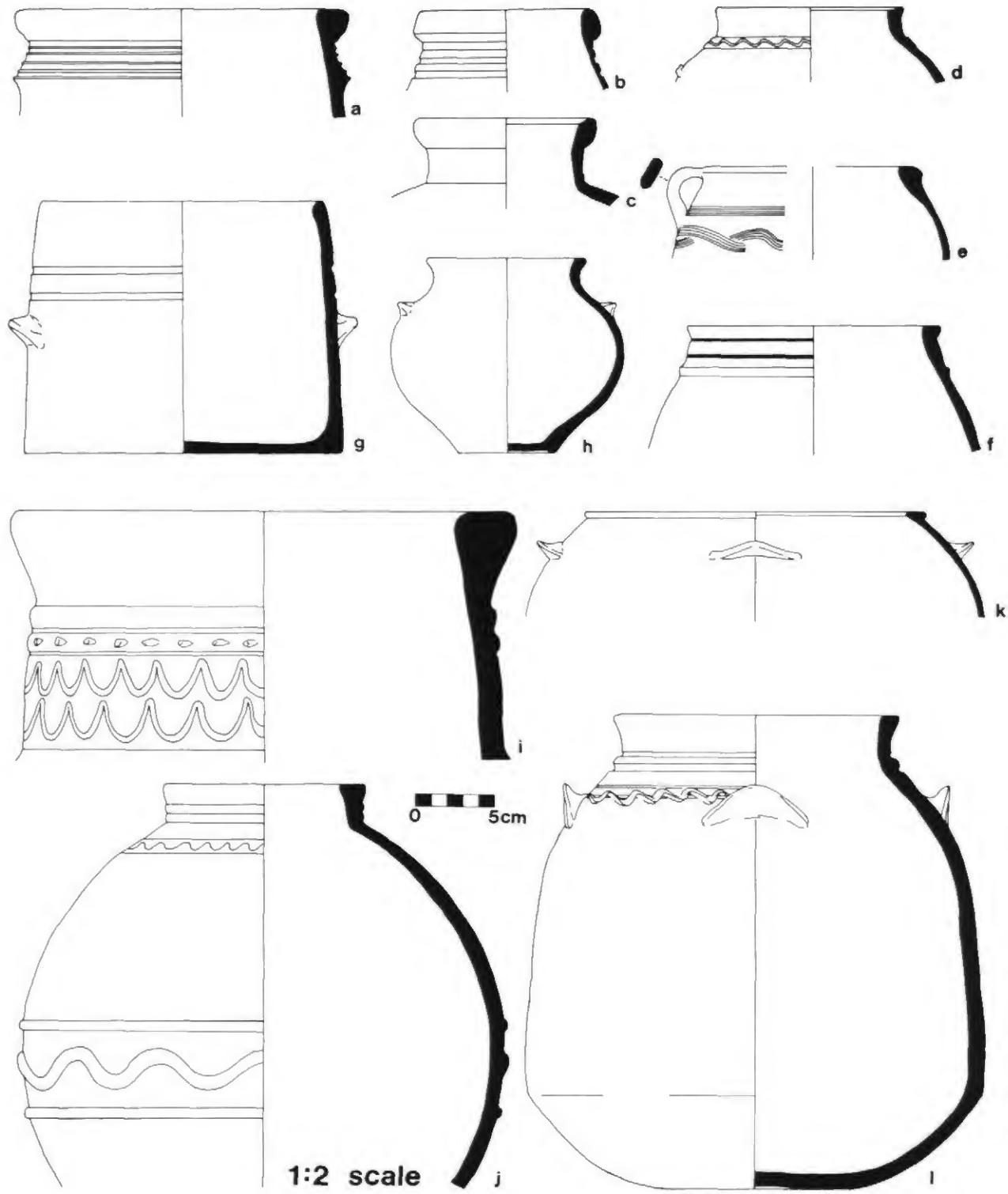


FIG. 19 Small jars and juglets

	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	greenish cream ware, black paint (Arabic inscription), grit temper	W6	A206.2	33.175.178	W6
b	greenish cream ware, black paint (Arabic inscription), grit temper	W6	A206.1	33.175.177	W6
c	cream ware, large black grit temper	W13-i	A87.1	34.107.11	W19-W13-W18
d	light orange ware, grit temper	W9	A132.4	34.107.47	W14-W9-W19-W18
e	fine gray ware, black slip	N Hump			N Hump
f	greenish cream ware	Bin	A283.1		NW Front . . . W11-W12
g	greenish cream ware, large black grit temper	W3	A87.5	34.107.9	W3-N8
h	cream ware, grit temper	W13	A132.5	34.107.17	23 . . . W20-W19-W13
i	greenish cream ware, chaff and grit temper	W2	A127.4	33.175.71	W2-W18
j	light orange ware, grit temper	W18	A71.1	33.175.3	22 . . . W3-W11-W12-W16-W15-W6-W9-W19-W2-W18
k	orange ware, cream slip	W19	A276.1	34.107.12	W9-W19

Good parallels are found along the Persian Gulf (a stratified example comes from Bahrain, 22d); otherwise comparisons are found with Istakhr (FH50 pit 3h, GL35 pit 2c), Nishapur (1973, 310.62, 311.64), and many other sites.

The juglets from Qasr-i Abu Nasr conclude with the types presented on Figure 21. Smaller, delicate juglets (Fig. 21a, b, e), which are generally associated with the juglets of Figure 20 and may be considered early Islamic (Istakhr, GL25 pit 2e; Nishapur 1973, 295.3, 336.1; Samarra 1925, 5; Wasit, 14.9). The first of these (Fig. 21a) is similar to an example with white glaze from Rayy dated by Lane to the mid-twelfth century (1956, 18). The find spots suggest a separation between two types found in Rooms 18-19, 24, 4, 2 (Fig. 21a, b) and one found in N7, N1, 3, 4, Bin, N11 (Fig. 21e). This distinction may have some chronological importance in that most of the remaining vessels in this group

are confined to northern loci (N1, 3, 4, N7, NW Front, Door Front East, and Room 8). The following features are distinguishing characteristics for these juglets:

1) Small handles, often with attached pottery rings (Fig. 21f, g), paralleled at Susa (1974a, 114), Nishapur (1973, 303.32), al-Mina (5a), Khirbat Karak (39.11), generally dated to the tenth century or later.

2) Elaborately articulated juglet necks (Fig. 21k, o) found in Istakhr (DF85 pit 1e, HL76 pit 4i), Wasit (14.6), al-Hasa (81.11), and Bahrain (24h); again contexts indicate a dating of the tenth century or later.

3) Juglet shoulders with very fine incised design (Fig. 21p, q) are paralleled at Hama (1967, 943, 947), Wasit (14.7), Samarra (1940, 87.7), and Nishapur (1973, 342.43a). In both style and motif

FIG. 19 Small jars and juglets

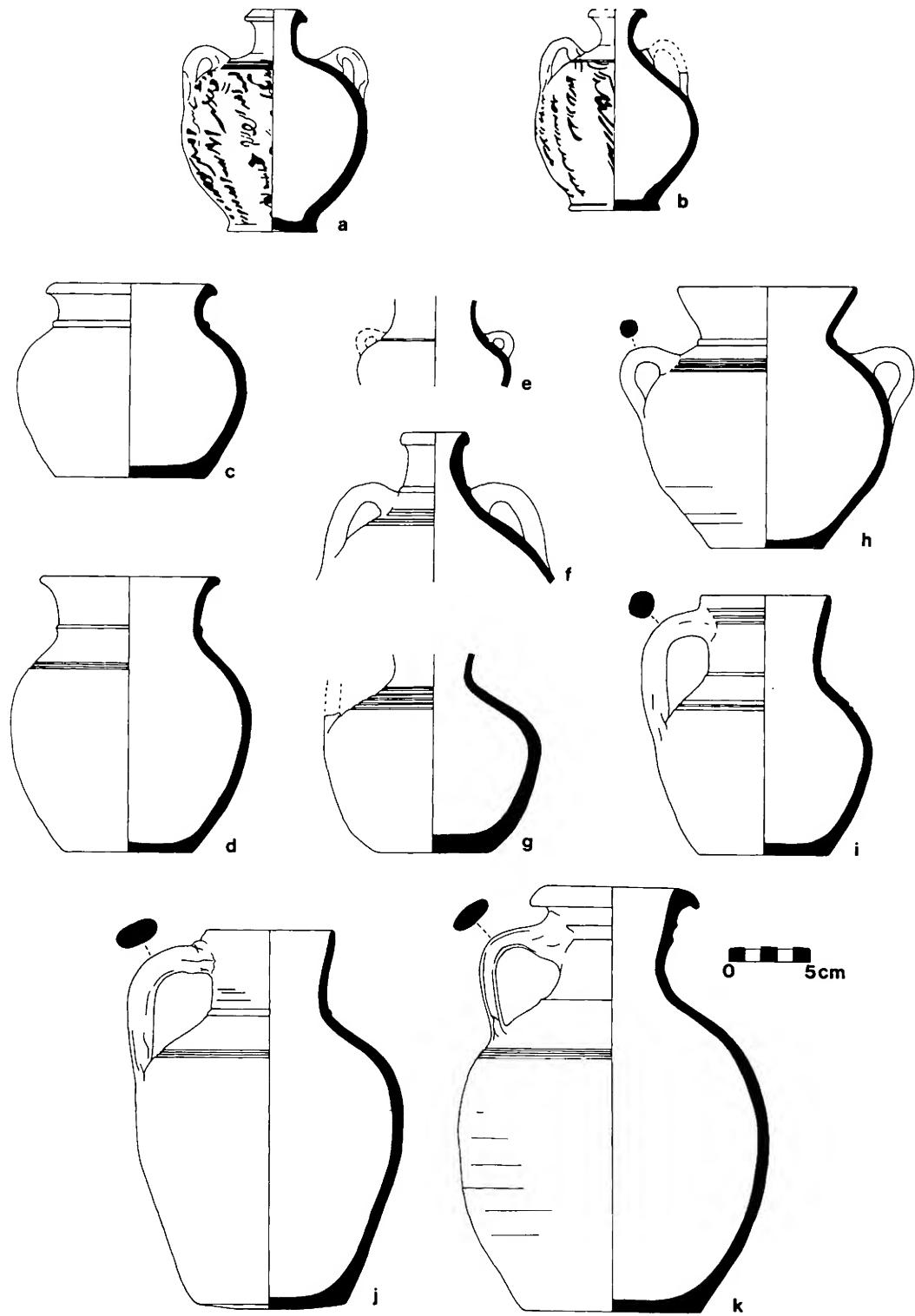


FIG. 20 Incised and glazed jars

	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	red-orange ware, turquoise glaze on interior and exterior	Room 4	A82, A113.2	33.175.61	4-22-21-N7-Door Front East
b	cream ware, grit temper	Room 20	A125.3	33.175.68	20-24-23-A,B-9-10-11-18-19-22-21
c	cream ware, grit temper	N7	A204, A284	34.107.50	N7-N8
d	greenish cream ware	NW Front	A78		5-24-23-21-NW Front-Door Front East
e	gray ware, grit temper	Room 24	A138	33.175.82	24-23-A,B-8-N1,3,4
f	greenish cream ware, grit temper	Room 23	A133.3	33.175.79	23-A,B-22-8
g	cream ware, grit temper	outside 18-19	A134.1	33.175.80	23-18-19
h	light orange ware, cream slip on exterior, grit temper	SE corner	A129.3	33.175.73	5-23-A,B-SE corner-21
i	greenish cream ware, grit temper	Room 20	A68	33.175.2	20-5-24-23-21-8-NW Front-N7-N1,3,4

this feature appears to have an affinity with the so-called late sgraffiato style (Whitehouse 1968, 15), although this glazed ware is entirely absent from the present collection. An eleventh-century or later date is thus indicated.

4) The large jar (Fig. 21t) is a unique piece on which the decorative impulse has become quite extravagant. The triple handles are connected with strips of clay (recalling a technique of glass decoration). The surface of the vessel and the handles are covered with myriad dabs of clay impressed with a waffle pattern (cf. glass; see below, Fig. 59p, q). Between the handles are medallions bounded by strips of clay with patterns of clay strips and incised fillers. In general the style is known from Istakhr (GL15 pit 4a), Susa (1977, 15g), al-Hira (18); it corresponds to the earlier style identified by Reitlinger (1951), although other Iraqi examples seem to indicate a range from the ninth into the eleventh century.

5) The final group contains a number of mold-decorated juglet fragments (Fig. 21r, u-ji). Hundreds of such fragments have been found at Istakhr with similar, yet never identical design elements,

possibly indicating two contemporary production centers. The Istakhr examples seem to date to the late tenth to the early eleventh century. Strikingly similar fragments were found at Nishapur (1973, 358.163, 356.153, 359.170). Stein found examples in southeastern Iran at Qal'at-i Jamshid with late sgraffiato vessels (1937, v). Iraqi examples come from Wasit (16.31), Samarra (1925, 41), al-Hira (1934, 18), and Bakr-Awa (3.1-3). The Bakr-Awa example is, with Reitlinger's (1935, 20), similar to a Qasr-i Abu Nasr example (Fig. 21r) with a molded inscription. Numerous examples of this style are found in museum collections and point to a continuation of molded techniques into the thirteenth and fourteenth centuries.

Following the series of jugs are bowls, again beginning with the heaviest utilitarian vessels, a series of presumably deep bowls, most of which have blue-green or turquoise glaze (Figs. 22a-k). The occurrence of frit ware is seldom noted in the surviving records. Few parallels were discovered: multiple handles (Fig. 22c, paralleled at Istakhr, HL76 pit 4p;

FIG. 20 Incised and glazed jars

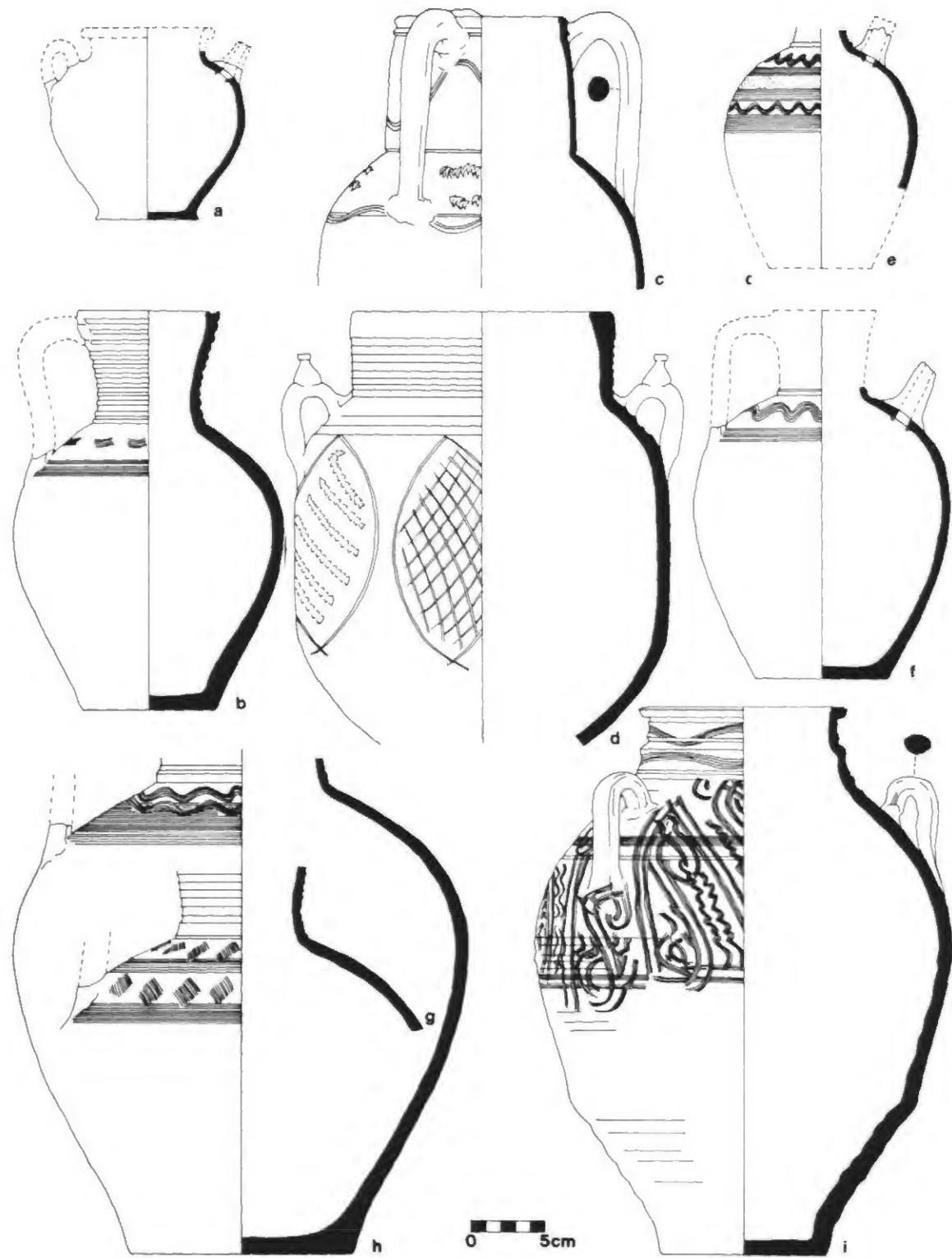


FIG. 21 Juglets and molded decoration

	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	cream ware	N7	A130.5	33.175.76	2-4-24-N Hump 18-19-8-N7
b	greenish cream ware, grit temper	Room 24	A130.1	33.175.74	24-N9
c	greenish cream ware	Room 21	A156		21
d	greenish cream ware	Room 18-19			18-19
e	greenish cream ware	Bin			N7-N1,3,4-Bin-N11-W6
f	buff ware	N7			N7
g	greenish cream ware	N7	A174		N7-NW Front
h	pink ware, blue glaze	NW Front			NW Front-N1,3,4
i	greenish cream ware	N7	A273		N7
j	yellow ware, golden brown glaze	NW Front			NW Front
k	greenish cream ware, cream slip	Room 18-19			9-10-11-18-19-8-Door Front
l	light red ware	N5			N5-NW Front-Door Front East
m	greenish cream ware, white slip	Door Front East	A288.3		Door Front East
n	greenish cream ware	NW Front			NW Front
o	greenish cream ware	Room 8			22-21-8
p	cream ware	N1,3,4	A156.2	33.175.96	2-N1,3,4
q	greenish cream ware	miscellaneous	A156		NW Front-N1,3,4
r	greenish cream ware	N1,3,4	A287.1		N5-N1,3,4
s	buff ware, red paint	N Hump, N			N Hump
t	cream ware, grit temper	N1,3,4	A167	34.107.57	4-5-24-NW Front-Door Front East-N1,3,4
u	greenish cream ware	N7			24-N7-N1,3,4-N8-Door Front
v	greenish cream ware	N1,3,4			same as "u" above
w	greenish cream ware				same as "u" above
x	greenish cream ware	miscellaneous			same as "u" above
y	greenish cream ware	N7			same as "u" above
z	greenish cream ware	Door Front			same as "u" above
aa	greenish cream ware	N8			same as "u" above
bb	greenish cream ware	Door Front			same as "u" above
cc	greenish cream ware				same as "u" above
dd	greenish cream ware	Room 24			same as "u" above
ee	greenish cream ware	N8			same as "u" above
ff	greenish cream ware	T17 (20)?			same as "u" above
gg	greenish cream ware	N1,3,4			same as "u" above
hh	greenish cream ware	Room 24			same as "u" above
ii	greenish cream ware	N1			same as "u" above
jj	greenish cream ware	Room 15			same as "u" above

FIG. 21 Juglets and molded decoration

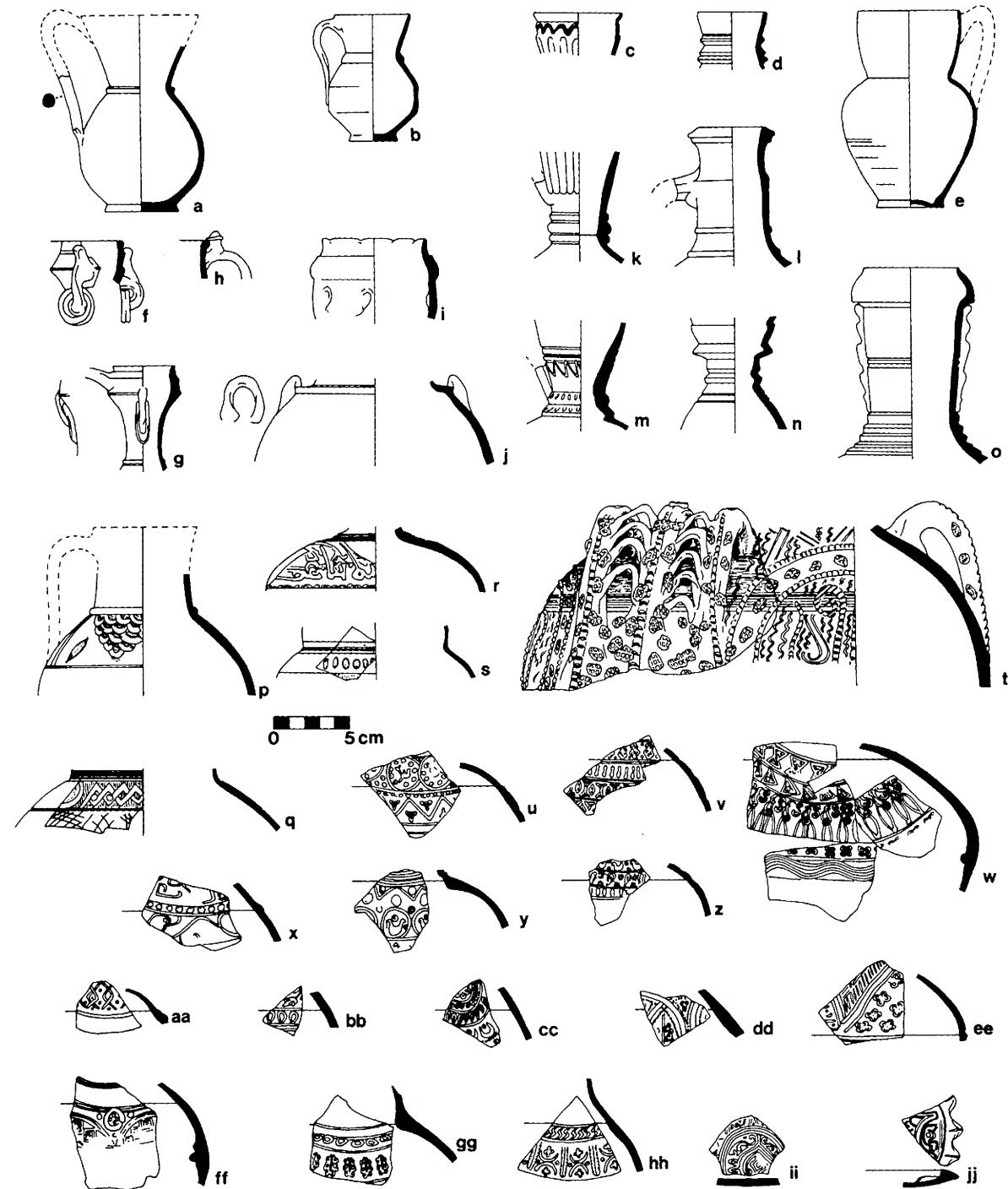


FIG. 22 Deep bowls and basins

	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	buff ware, cream slip	N7	A287.2		22-21-N7
b	buff ware, white glaze; light blue glaze on interior	N7	A153		NW Front-N7
c	blue-green glaze	N Hump, N	A168		N Hump
d	buff ware, green glaze on exterior	NW Front			NW Front
e	blue-green glaze	Room 22			22-21
f	turquoise-blue glaze	Room 22			22
g	dark blue-green glaze, blue lines (?)	N1,3,4			N1,3,4
h	yellow ware, white glaze on interior and exterior	Door Front East			NW Front-Door Front East
i	turquoise-blue glaze	Room 22			N Hump-22
j	yellow ware, blue-green glaze on interior and exterior	Door Front East			Door Front East
k	greenish cream ware	N7	A273		N7
l	blue-green glaze on interior and exterior rim	Room 22			22-21
m	pink ware, red slip	Room 17			4-5-24-18-19-NW
					Front-N8-W11-W12-W6-W10-W18
n	greenish cream ware	Room 10	A288.6		10 . . . W16-W9
o	light orange ware, grit temper	W16	A172.8	33.175.172	10
p	greenish cream ware	Room 10	A172.12	33.175.175	10
q	greenish cream ware	Room 8			8
r	greenish cream ware	N5			5
s	buff ware	Room 24			24
t	greenish cream ware, heavy grit temper	Room 21	A131.2, A158		5-21-8 . . . W3-N11-W11-W12
u	coarse green ware; black slip on interior, red slip on exterior	N Hump, N			24-N Hump-10-22-21-8 . . . W3
v	greenish cream ware, heavy grit temper	W3			W3

FIG. 22 Deep bowls and basins

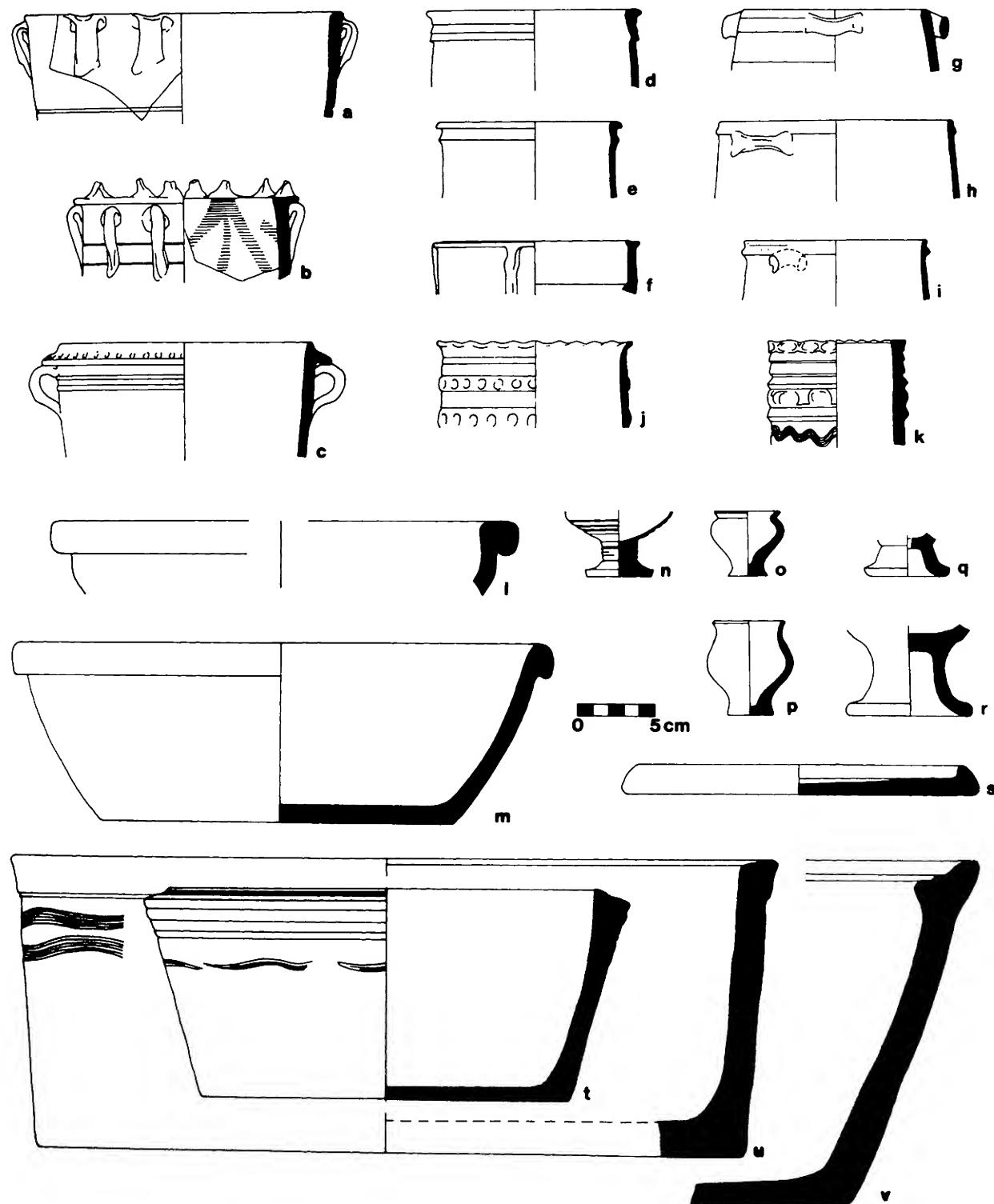


FIG. 23 Unglazed bowls and pots

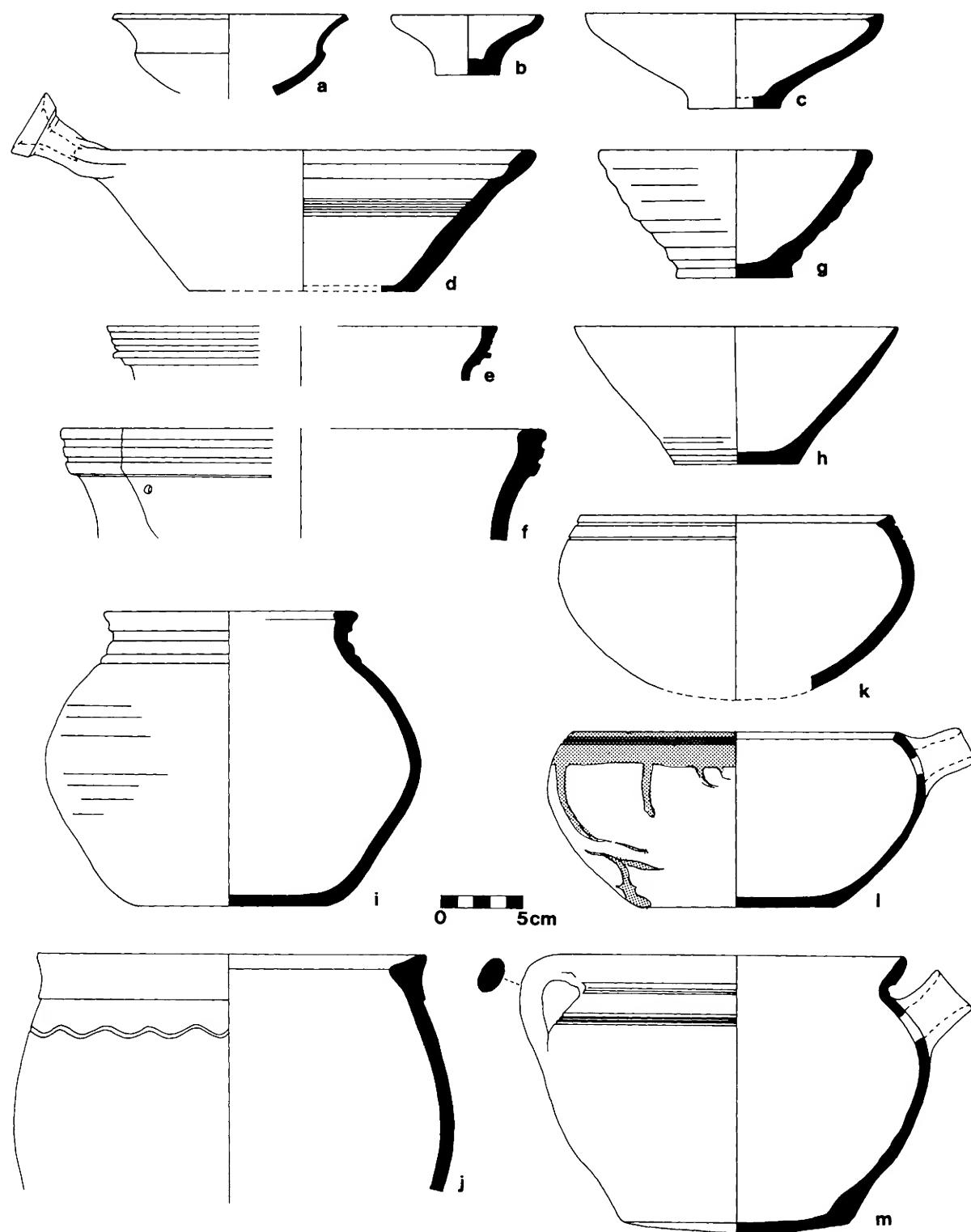
	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	buff ware	W9			W9
b	cream-tan ware, cream slip, chaff and grit temper	Room 22	A172.10	33.175.173	22
c	pink, coarse ware	NW Front			23—NW Front
d	orange ware, cream surface, except base	W9	A273.7	34.107.15	9—10—11 . . . W9
e	pink ware, burnished red slip	W10			W10
f	pink ware	Room 5			5
g	greenish cream ware, heavy grit temper	miscellaneous			18—19—22—21—NW
h	pink ware	W13-i			Front . . . W11— W12—W6—W13
i	buff-cream ware, large grit temper	W9	A132.3	34.107.76	W9
j	red ware, buff slip on exterior, heavy grit temper	W9			W11—W12—W9— W19—W18
k	dark green ware, heavy grit temper	W19			W19
l	cream ware, red paint on interior and exterior	W13	A140.2	33.175.83	W11—W12—W9— W13—W18
m	orange ware, grit temper	W3	A140.1	36.30.52	5—22—8—NW Front— W3—Door Front— East—N10—W14

Bakr-Awa, 4.19); rims (such as Fig. 22d, e, also at Abu Sarifa, 6a, f; al-Hasa, 77.23), horizontal strap handles (Fig. 22g, h, i, at Nishapur 1973, 278.12), and impressed bands (Fig. 22j, k, at Mahuz 1970-71, 42; Bakr-Awa, 4.28). Thus with the exception of three bowl forms (Fig. 22g-i), the parallels suggest an early Islamic dating range. Others may range later, a conclusion supported by the recorded loci (N1, 4, N7; NW Front; Door Front East; Rooms 21, 22). The large bowls (Fig. 22l, m) occur in a wider spatial context, as do the ceramic pans (Fig. 22t, u, v), sherds of which were scattered throughout the site. Parallels for the bowls with heavy rounded rims (Fig. 22l, m) come from Istakhr (GE93), Abu Sarifa (6b, g), al-Hasa (78.9, 80.19), and Nishapur (1973, 318.18). The pans have a similar distribution: Istakhr (IL56 pit 1a, GL15 pit 2c), Abu Sarifa (5b, c), Susa (1972a, 59.3), al-Hasa (78.4), and Nishapur (1973, 313.67). Not surprisingly the temporal range seems as broad as the

geographic for these vessels. Finally a few smaller vessels are here included: a small goblet base (Fig. 22n), for which there are parallels of fifteenth century or later date along the Persian Gulf; miniature jars (Fig. 22, o, p), which have comparisons at Susa (1977, 32a, c), Samarra (1940, 54.6), and Nishapur (1973, 326.133); high unglazed bowl bases, which curiously have few parallels other than a general similarity with deep bowls of the thirteenth and fourteenth centuries; and a flat lid(?), which is also found at Istakhr (GE92).

The vessels illustrated on Figure 23 continue the range of unglazed bowls from the western site. The first bowl (Fig. 23a) seems similar to the ceramic type generally taken to be Achaemenid-Seleucid (the so-called S profile; Persepolis 1957, 72.1). Plain bowls with gracefully curving sides (which may have been lids; Fig. 23b, c) were found in Rooms 22 and 23 and the NW Front; these contrast with straight-sided bowls, which were ubiquitous (Fig. 23g, h).

FIG. 23 Unglazed bowls and pots



Other vessels were more distinctive, such as rims (Fig. 23e, f), which seem without good parallels (Pasargadae, 119.35) or a shallow vessel (Fig. 23d) that seems, from discoloration near the base and the round handle socket, to have been a brazier (at Godin 1974, 47.45; Nessana 52.76).

The inward-curving bowl with inward-beveled rim and incised bands is an important piece for dating purposes (Fig. 23k). Identical vessels were found at Istakhr in clearly Sasanian contexts (GE92, HE02, GL15 pit 4d). The most distinctive element, the inward-beveled rim, is related to that of the preceding, larger vessel (Fig. 23j, with comparisons at Istakhr, GE92; Bahrain, 18r). This rim form is in turn associated with that of a jar (Fig. 23i), which was also found in the western loci. The last two bowls, with short spouts, illustrate an interesting typological correlation: the first example (Fig. 23l) has an inward-beveled rim and red wash (cf. Fig. 17c) and was confined to the western loci, but the second example (Fig. 23m), with its flaring rim and comb-incised band on the shoulder, relates to the juglets shown in Figure 19. This type was found in Rooms 22, 5, 8, and W₃, in NW Front, and in Door Front East, strongly suggesting an early Islamic temporal range; somewhat similar vessels are from Susa (1974a, 13b) and Nishapur (1973, 321.95).

The glazed bowls and beakers (Fig. 24) represent the most diagnostic vessels of the early Islamic, and especially Abbasid, period. These bowls are decorated in opacifying glaze, presumably of a tin base. The first series of these bowls comprises small, white-glazed vessels (Fig. 24a, b, c, e, f) on a light orange or cream body (the cream often labeled "Samarra ware"). Such bowls often have been considered Islamic imitations of Chinese vessels and may be compared with an actual piece of porcelain (Fig. 24d) found in the same area. This sherd has the petal motif, a form adopted on many Islamic vessels on the rim (e.g., Fig. 24l, p).

It should be noted that the vessels at Qasr-i Abu Nasr were often repaired with iron staples, suggesting rarity and long usage. Similar wares occur more frequently at Istakhr, such as the scalloped rim (Fig. 24f; GL35 pit 2a, IL56 pit 1c). A second, associated decorative style, the splash-glazed ware (Fig. 24n, u) is also more frequently found at Istakhr. This style is amplified in what is called early

sgraffiato ware (Fig. 24g, h) and late sgraffiato ware (Fig. 24q). Another distinctive early Islamic decorative style is a white glazed ware with cobalt-blue patterns (Fig. 24t). The forms of the vessels mentioned above are generally open bowls and, more rarely, deep beakers. Other vessel forms (Fig. 24i, j) have decorative features of the champlevé style, which may be later in date, as is the case for two of the bowl forms (Fig. 24, o, r).

Perhaps the best-known assemblage of this early Islamic ceramic industry is that of Susa. Recent analyses of the various sections of this large site—the Ville Royale (Susa 1972a, 1974a), the Apadana (Susa 1974b, 1977), and areas along the Chaour River (Susa 1972b, 1979a, b)—have greatly increased the understanding of early Islamic ceramics in Iran. Rosen-Ayalon's work (1972) presents a large corpus, but it is with Kervran's studies (1977, 1979) that refinements of stratification became possible. There are several parallels with the glazed bowls and beakers at Qasr-i Abu Nasr (Fig. 24g, h; at Susa 1974, 613, 618; 1977, 44.1, 3, 4; Fig. 24n, q; at Susa 1974, 439, 580, 606; 1977, 44.5, 6; Fig. 24s, t; at Susa 1974, 474; 1977, 40.10). Such parallels might be multiplied; for the present the implications for early Islamic ceramic studies must await further publications of the Susa stratigraphic evidence.

Glazed ceramics of the ninth and tenth centuries in the western area were confined to the following loci: in the northern portion, N1, 3, 4, 8; North Hump; NW Front; and in Rooms 4, 5, 9–10, 18–19, 21, and 24. The proposal that the western building is a Buyid pavilion, probably built by Adud al-Daula in the mid-tenth century, presents an opportunity for refining this phase of early Islamic ceramics. The deposition of refuse (especially old repaired vessels) seems unlikely during the use of the building. While pre-Buyid deposition cannot be discounted, accumulation after Adud al-Daula is more likely; this dates such ceramics to almost a century after the abandonment of Samarra.

Confirmation of this sequence of late Abbasid or Buyid materials may be derived from the still-unpublished information from the excavations at Istakhr or from Siraf (1979). The entire group of shallow bowls and beakers (Fig. 24) is closely paralleled in the excavated materials from the port of Siraf, especially Siraf's Period 2, that of the greatest

prosperity during Abbasid rule, when splash, early sgraffiato, and cobalt-decorated glazed wares were found in association with Chinese porcelains and stonewares.

Celadon was the most common ceramic imported from the Orient. It occurred first along the Persian Gulf, especially at Siraf (1968, 17). From the ninth century onward this fine stoneware was traded into the Iranian plateau; sherds have been found at Istakhr and in the region of Shiraz. Gotch lists eight sites in the plain of Shiraz, mostly south and southwest of the modern city (1968, 169-70). At Qasr-i Abu Nasr numerous pieces of celadon were found, although no examples were drawn or preserved; the following loci were recorded: the NW Front, N corner, Door Front East, and Rooms 18-19, 21, and 22 (pl. 26).

Figure 25 illustrates sherds that may be associated with the latest archaeological phase, that of the Muzaffarid khanagah. The first bowl (Fig. 25a) is an example of thirteenth- to fourteenth-century lusterware with blue-glaze decoration. This has a good parallel in Reitlinger (1935, 13a), where it is traced to Syrian ceramics of the fourteenth century; another parallel comes from Shahr-i Daqianus (Stein 1937, 21). A second sherd of lusterware has a portion of an inscription (Fig. 25h). The floral motif recurs on sherds with a black decoration under blue, turquoise, or green glaze (Fig. 25c, e, g, j-m; Fig. 25k is found at Susa 1974a, 500). A second, less common style of late glazed ceramics has blue and white decoration (Fig. 25b, d, f, i, n). Certain of these sherds with bold geometric designs recall unglazed painted wares found in southern Iran during this period (in the Kuh Jiluyeh area; Whitcomb 1979a, 206-21; Gaube 1973, 76). The deep bowl (Fig. 25p) is described as a sgraffiato ware, apparently without glaze. Another style of glazed wares that is typical of assemblages in this period is that with deep cobalt-blue glaze (Fig. 25q-v). These are most often bowls with a hammerhead rim form, beneath which is often a pseudo inscription (Fig. 25s; Fig. 25v, an open bowl, also bears an inscription on the rim).

Dating of the remaining glazed bowls is more problematical. One (Fig. 25z) is paralleled in Fehervari's study (1973, 163) and placed, as a product of Kirman, in the fourteenth century. The provenances of the glazed wares in this group include the

areas around the pools (N1, 3, 4, N8), near the late doorway (Door Front, Door Front East), and near the wall labeled NW Front; a few also occurred in Rooms 21 and 24. Thus the ceramics of the ninth to tenth century and those of the thirteenth to fourteenth century come from virtually the same loci, indicating that this structure was used in the two periods.

One of the rare excavations of a site that may be said to be Muzaffarid is that at Ghubayra in the neighboring province of Kirman. The Muzaffarid and earlier Iklhanid occupation of this site is suggested by stamped bricks (Bivar and Fehervari 1974, 132), underglaze painted in blue and black, turquoise glaze with molded decoration, and eggshell wares with relief and molded decorations (especially in Layer IV of the citadel: 1974, 115). In Room 4 a similar assemblage was found in association with a coin of Shah Shuja, minted in Shiraz (Bivar and Fehervari 1974, 128). Although this pottery corpus has not been published, the unpublished descriptions suggest it is close to the thirteenth- and fourteenth-century materials at Qasr-i Abu Nasr. This may be misleading, however, since Ghubayra also seems to have been occupied in Samanid and Seljuq periods (Seljuq sgraffiato and slip-painted "Samanid" wares; Bivar and Fehervari 1974, 113), ceramic styles that are absent at Qasr-i Abu Nasr.

The situation of having two middle Islamic periods is also paralleled in the excavations at Dasht-i Deh near Sirjan, also in Kirman province. The earlier occupation is marked by Seljuq frit and sgraffiato and molded wares of the twelfth and thirteenth centuries. Williamson distinguishes a later period of the fourteenth century on the basis of painted wares, celadon, black-under-turquoise wares, and hammerhead rims (1971, 182-83). Again, in the absence of a formal ceramic corpus, it can only be assumed that the parallels with Qasr-i Abu Nasr will be closer to the later period, the fourteenth century.

Finally, there are a few specialized types of pottery (Fig. 26; the glass in this figure will be treated in Chapter III with the glass from the fortress). The lamps have three distinctive forms (Fig. 26a, b; Fig. 26c, d; Fig. 26e, f); all of these appear to be varieties of glazed lamps of the early Islamic period, known from Samarra (1925, 74, 75), Kufa (14), Susa (1974a, 294), and Nishapur (1973, 245.20, 208.11,

FIG. 24 Glazed bowls and beakers

	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	orange ware, cream slip, white glaze on interior and exterior	Room 4	A92.4	33.175.43	4-5-N Hump-9-10-21-N7-Door Front East
b	orange-tan ware, white slip, green glaze on interior and exterior	Room 18-19	A114.4	33.175.64	18-19-NW Front
c	cream ware, white glaze on interior and exterior repaired	Room 21	A92.3	33.175.42	21
d	bluish white porcelain	Door Front East	A99		18-19-NW Front-Door Front East-N1,3,4
e	cream ware, white glaze on interior and exterior	Room 4	A92.1	33.175.40	4
f	light orange ware, cream slip, white glaze on interior and exterior repaired	Room 4	A92.2	33.175.41	4-21-N1,3,4
g	red ware, white slip, yellow glaze, sgraffiato	miscellaneous			N Hump-N1,3,4
h	orange ware, white slip, yellow and green glaze, sgraffiato	Room 4	A105	33.175.49	4-21-N8
i	greenish cream ware	N1,3,4			N1,3,4
j	buff ware, "champlévé"	N1,3,4,7			9-10-21-N1,3,4
k	red ware, white slip, "painted decoration in green and black, brown glaze on exterior"	Room 24			24-8
l	yellow ware, thick white glaze on interior and exterior	miscellaneous		33.175.97	Bin-Door Front East
m	pink ware, "green-blue on white glaze"	W11			5-NW Front-N1,3,4-W11-W12
n	cream ware, white slip, green, yellow, brown glaze	N Hump, Bin	A89.1, A90.1	33.175.38	N Hump
o	coarse buff ware, blue glaze on interior and exterior	Room 21			21-N8
p	cream ware, turquoise-blue glaze on interior and exterior	N Hump, Bin	A89.2, A90.2	33.175.39	5-N Hump-9-10-18-19-21
q	red ware, white slip, green, yellow, brown glaze, sgraffiato	N7a	A116.1	33.175.65	N7
r	coarse gray ware	W14			N Hump-N8-W14-W13
s	cream ware, green glaze, sgraffiato	N Hump	A113.3	33.175.62	N Hump
t	buff ware, turquoise-blue on white glaze	Door Front East	A151		Door Front East
u	light orange ware, white slip, yellow, green, brown glaze	Room 24	A80	33.175.8	24-22

FIG. 24 Glazed bowls and beakers

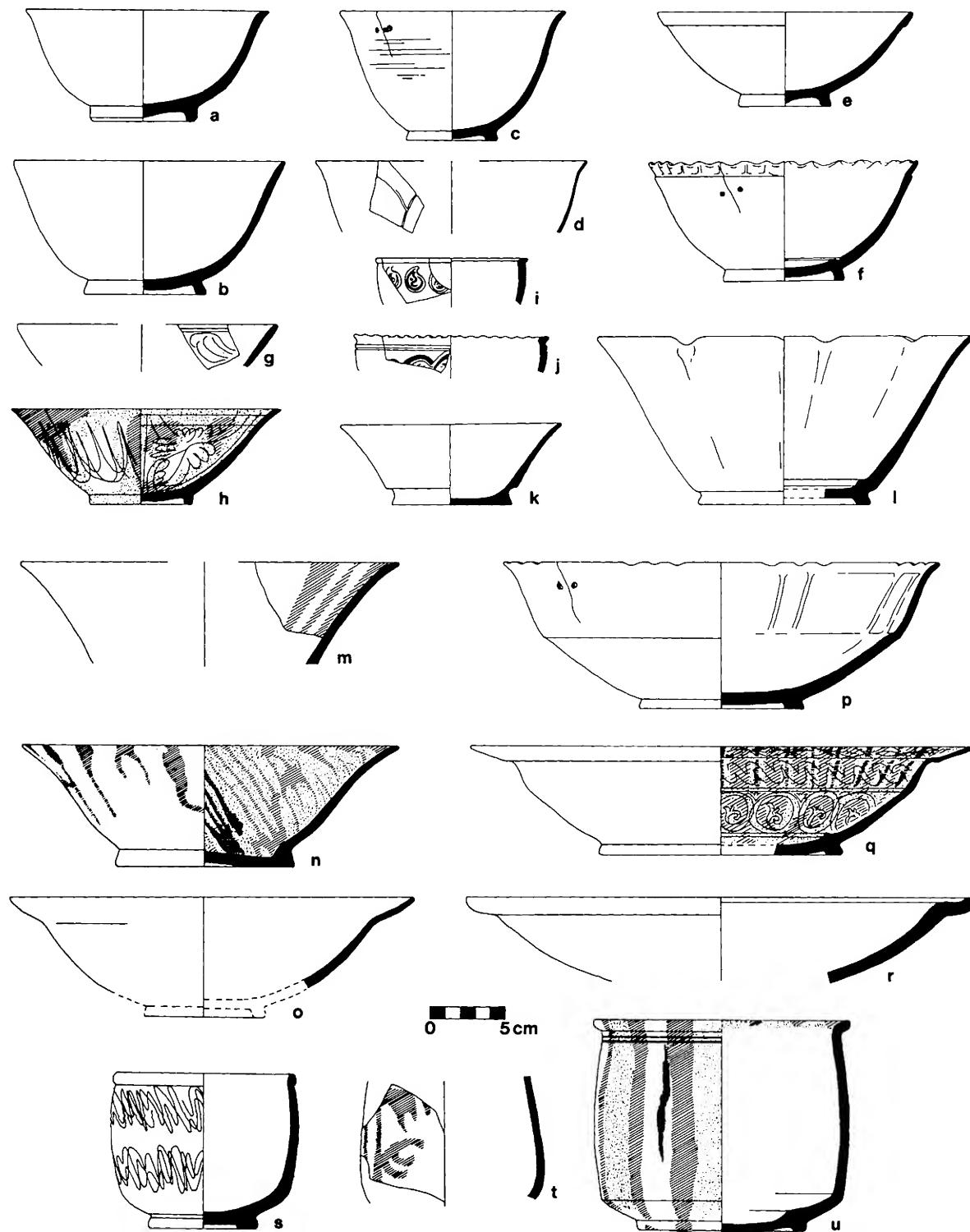


FIG. 25 Glazed bowls

	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	"copper luster on deep blue"	miscellaneous			
b	buff ware, blue on white glaze	Room 24	A151-6(?)		24
c	yellow ware, black under green glaze	NW Front			18-19-NW Front
d	buff ware, blue on white glaze	miscellaneous	A151		
e	buff ware, black under green glaze	miscellaneous			
f	frit (?), blue and black glaze	N1,3,4,7			N1,3,4
g	yellow ware, black under blue glaze	Door Front East	A100.6		Door Front East
h	yellow ware, copper luster	Door Front East			Door Front East
i	yellow ware, dark blue on white glaze	Room 24			24-N5
j	buff ware, black under turquoise glaze	NW Front			NW Front-Door Front East
k	buff ware, black under blue glaze	miscellaneous			
l	buff ware, black under blue glaze	miscellaneous			
m	yellow ware, black under blue-green glaze	N8			N8
n	blue on white glaze, some incised decoration	N1,3,4			N1,3,4
o	cream ware, black under blue-green glaze	NW Front			21-NW Front
p	pink-buff ware, sgraffiato	miscellaneous	A156		
q	yellow ware, bright blue glaze	W20			W20
r	blue glaze	Room 24			24-Door Front East
s	buff ware, turquoise glaze	miscellaneous	A153		
t	buff ware, white slip, cobalt glaze	miscellaneous	A172.2		
u	pink ware, white slip, turquoise glaze	N Hump, N			24-9-10-N Hump-N8
v	buff ware, dark blue glaze	Room 24			24
w	pink ware, white glaze on interior and exterior	Room 5			5
x	buff ware, blue glaze on interior and exterior repaired	Room 21			21
y	buff ware, cobalt blue glaze on interior and exterior rim	Room 21			21
z	cream-buff ware, blue glaze, tripod marks on interior	Room 21	A114.2	33.175.63	21-N Hump-N8-W9-W10
aa	white clay (frit?), dark blue and turquoise on white glaze	N8			N8
bb	yellow ware, blue-green glaze	N8			N8
cc	purple glaze on interior and exterior	Door Front East			Door Front East
dd	buff ware, bright blue glaze	N1,3,4			NW Front-N1,3,4

FIG. 25 Glazed bowls

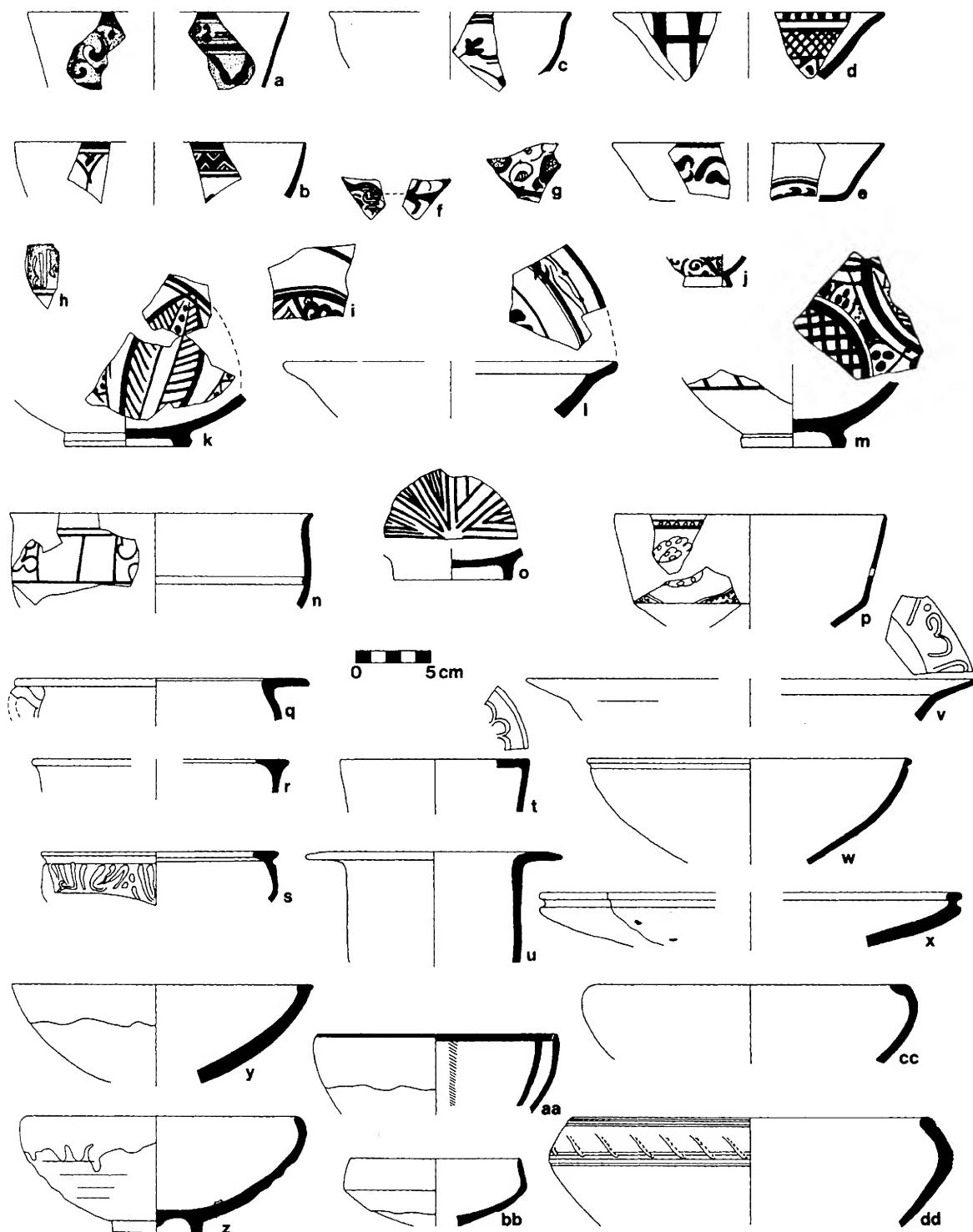
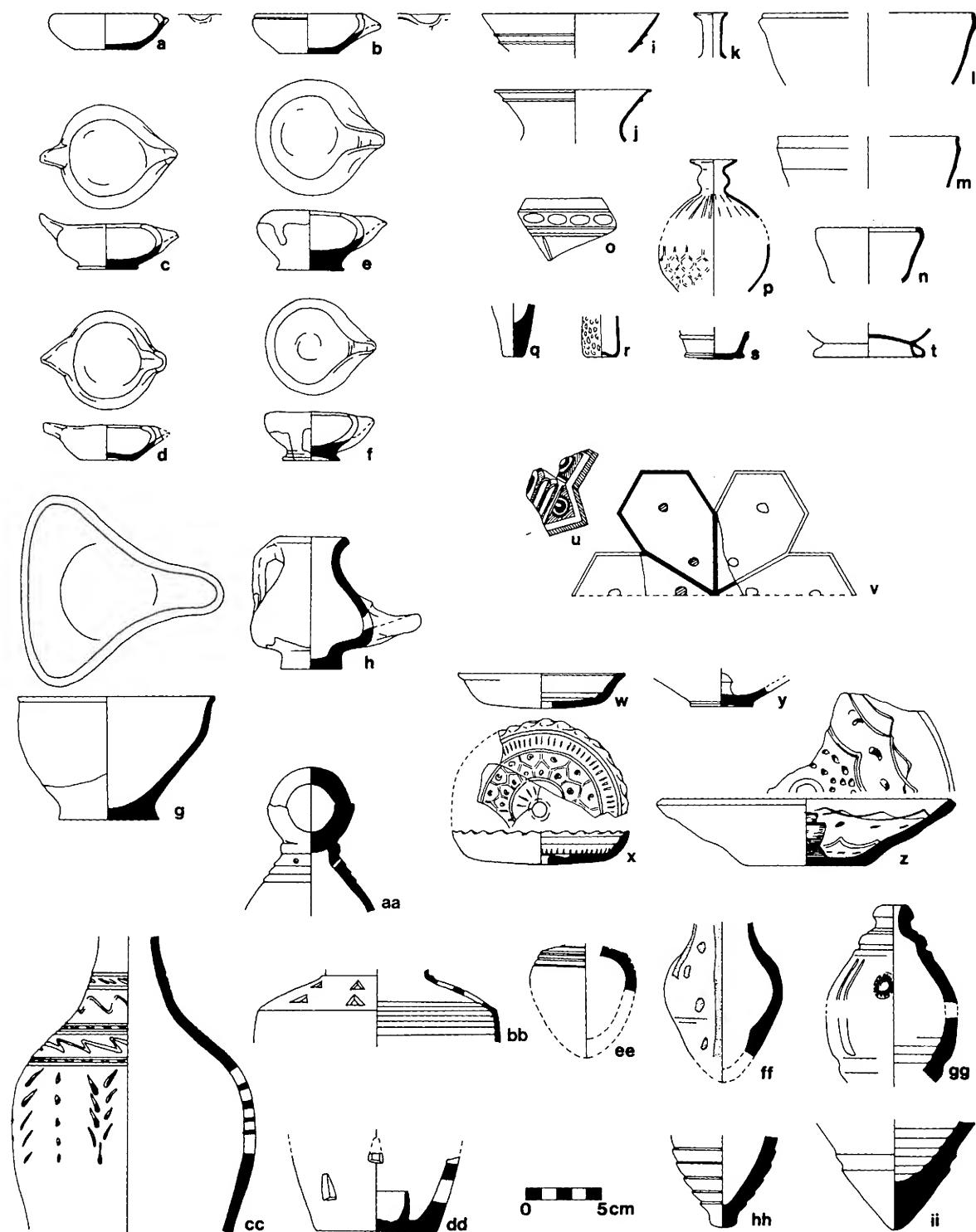


FIG. 26 Lamps, tiles, glass, and miscellaneous ceramics

	Description	Location	Photograph no.	Accession no.	Comparanda (seriation locations)
a	greenish cream ware	Room 24	A169.11	33.175.107	24-N5-22-NW Front
b	cream ware (blackened spout)	Room 20	A169.10	33.175.106	20
c	buff-orange ware, blue glaze on interior and exterior	N7	A169.12	33.175.108	N7
d	orange ware, white slip, traces of blue glaze	Room 20	A169.9	33.175.105	20
e	greenish cream ware, blue-green glaze	Room 21	A169.3	33.175.102	21
f	greenish cream ware, blue-green glaze	Room 21	A169.8	33.175.104	21
g	buff ware, white slip, turquoise glaze on interior and exterior	N Hump	A137		N Hump
h	cream ware, blue glaze on interior and exterior	Room 5	A81	33.175.9	5-NW Front
i	clear glass	W20			W20
j	clear glass	W20			W20
k	green glass	miscellaneous			
l	clear glass	Bin			Bin
m	blue glass	Bin			Bin
n	green glass	Bin			Bin
o	blue glass	Bin			Bin
p	light green glass	N7	A203		N7
q	green glass	N7			N7
r	clear glass	N7			N7
s	clear glass	Bin			Bin
t	clear glass	Bin			Bin
u	buff ware (tile), black, blue, turquoise, manganese glaze	N7	A152		N7-Door Front East
v	tile, dark blue with turquoise spots	N8	A152		Door Front East-N8
w	cream ware, white slip, green glaze, slightly mottled	miscellaneous	A172.11	33.175.174	NW Front-N7
x	cream ware (?), white slip, mottled green glaze	Door Front	A172.3	33.175.171	Door Front East
y	greenish cream ware	N Hump, N			24-N Hump
z	green ware (repair holes)	N1,3,4	A157.2	34.107.16	N1,3,4
aa	greenish cream ware	Room 22	A174		22
bb	greenish cream ware	Room 24			24-22
cc	light orange-buff ware	miscellaneous	A103	34.107.18	
dd	green ware	Room 21	A157		21
ee	green "stoneware," burnished	Room 24			24
ff	buff ware, red paint	Room 4	A287.7		4
gg		miscellaneous	A273		
hh	green ware	miscellaneous	A273		
ii		miscellaneous	A273		

FIG. 26 Lamps, tiles, glass, and miscellaneous ceramics



245.21, 107.75). A larger type of glazed lamp (Fig. 26g) has a somewhat similar parallel at Nishapur (on a stand; 1973, 278.5). More elaborate lighting fixtures were in the form of lanterns (Fig. 26aa-dd), known from several fragments but no complete example. These lanterns are also found at Samarra (1925, 10). Susa (1974a, 304), and especially Nishapur (1973, 343.52,53). All the lamps and lanterns were found in either N6, NW Front, or Rooms 20, 21, 22, and 24.

Two fragments of tiles were recovered from the western site, both from the region of Hauz 1 (N7, 8). The first seems a portion of a typical hexagonal tile (Fig. 26u); the second is somewhat unusual and may be incorrectly reconstructed (Fig. 26v). This latter tile does bear some similarity to a stucco panel found at Siraf (1970, XIa, Site F, House N).

Four examples of lids were also found; the glazed examples (Fig. 26w, x) have a mottled green glaze;

the latter has a lightly molded design, recalling green-glazed relief wares from Susa (1974a, 200-211) and other early Islamic sites (the diaper pattern is exactly paralleled in a Chinese example of the tenth century now in the Hetjens-Museum, Düsseldorf [Klein 1973, 272]). The two lids with small internal knobs are more usual; the first type (Fig. 26y) was found also at Susa (1974a, 275-76), Choche (184), Kufa (14), and Nishapur (1973, 306.47), while the second type (Fig. 26z), seems more usual in Fars province, at Istakhr (GE92, HE03) and Naqsh-i Rustam (1971, 29.1). Both of these lid types occur from late Sasanian through early Islamic.

Finally a number of so-called grenades, known from early Islamic sites throughout the Middle East, were found at Qasr-i Abu Nasr (Fig. 26ee-ii). These little specialized containers, including one painted example, occur in a range of shapes.



bottom: PL. 6. View of the western area from the plain looking east



top: PL. 7. East side of the khanagah, Rooms 14, 15, 16, facing the court

bottom: PL. 8. South side of the building with semicircular buttress and jambs of fallen doorway against far wall



top: PL. 9. Doorway to the Muzaffarid khanagah

bottom: PL. 10. View south from the pool, Hauz 2, to the khanagah doorway



top: PL. 11. View across the central chamber of the chahar fasl (Room 5). Earlier walls visible below the floor

bottom: PL. 12. Building W19, looking southwest across two rows of piers



top: PL. 13. Hauz 3 in the foreground and the Octagonal Building (N11) in the right background
bottom: PL. 14. A corner of the Octagonal Building (N11) with fallen stucco fragments



top: PL. 15. Ceramics with comb-incised decoration (Fig. 20)

bottom: PL. 16. Incised cream ware sherds (Fig. 21)



top: PL. 17. Sherds with molded decoration (Fig. 21)
bottom: PL. 18. Sherds with molded decoration (Fig. 21)



top left: PL. 19. Sherds with molded decoration (Fig. 21)

top right: PL. 20. Sherds with molded decoration (Fig. 21)

bottom: PL. 21. Jar with incised and appliquéd decoration (Fig. 21t)



top and bottom: PL. 22. Splash glazed bowl, green and yellow glaze



top: PL. 23. Luster ware sherds

bottom: PL. 24. Black under blue glazed sherds



top: PL. 25. Miscellaneous glazed sherds
bottom: PL. 26. Celadon and blue and white porcelain



top: PL. 27. Blue glazed sherds with molded decoration
bottom: PL. 28. Glazed tiles

CHAPTER III

The Fortress (The Sasanian Citadel)

The fortress at Qasr-i Abu Nasr is built upon a natural rocky outcrop, or mesa, separated from the mountain to the north by a deep dry watercourse. The lower town abuts this mesa and stretches to the west. The flat-topped butte is roughly triangular in plan, tapering from the northern face to a point marked by the great stone bastion in the south. The northern and eastern sides are precipitous rock faces; this cliff continues around the northwest corner and drops off to a more gentle slope on the western side. The natural defenses provided on the north and east were continued on the exposed west side by a system of stone cribs closing the perimeter of the outcrop. Access to the fortress is through a gate and ramp cutting through this constructed area. The natural surface of the mesa must have been relatively level, although a central north-south ridge may have existed (the height of bedrock within the excavations is not noted in the extant records).

The reconstruction of the excavations on the fortress at Qasr-i Abu Nasr can be only tentatively suggested. The preliminary reports hint at the procedures used and areas excavated, but naturally they focus primarily on the finds and results. Until further records, such as a diary or field notebook, are discovered, an understanding of these excavations can be only inferred from the plans, photographs, and artifacts. The most useful element in this extant record is the original site plan on the field survey sheet (in pencil on heavy paper).

The surface contours of the fortress were reconstructed from survey elevations after the close of the excavations. A base line (0 meters) was set (the datum is at present unknown) and contours drawn from -4 meters below datum to +16 meters above da-

tum, giving a variation of 20 meters on the top of the outcrop. Contour intervals are 2 meters (see Fig. 27). The survey logbooks for these contours and for elevations within the excavations are no longer available. A series of sections had been reconstructed across the surface of the fortress based on these measurements. These sections are represented on the contour map with the basal line of each section indicating the position of the hypothetical cut or section. The drawn height of each section is therefore relative; the important information is the surface contour and the depth of excavation, which are recorded nowhere else.

The southern section, a-b, graphically demonstrates the relationship between the great stone bastion, a double stone wall about 13 meters in height, and the podium, or so-called fire altar. This podium was at the time of excavation only a narrow ridge of earth piled behind the bastion wall and an earthen mound immediately south of Point b. Within this area was a rectangle of stone facings, indicated on the site plan (Fig. 28, Locus 78); no other information is available concerning this feature, and it was evidently not further explored. The northeast face of the podium is indicated as a stone wall about 4 meters in height.

The portion of the fortress north of the podium forms a sort of waist before the wide northern area. This waist area is transected by two sections, c-d on the south and e-f on the north. In the southern section the western three walls near Point c are part of the cribbing (see Fig. 28, Locus 54) intended to raise the defensive perimeter. Higher up this slope are two mud-brick walls (Locus 82), the inner of which has regular buttresses suggesting a visible defensive

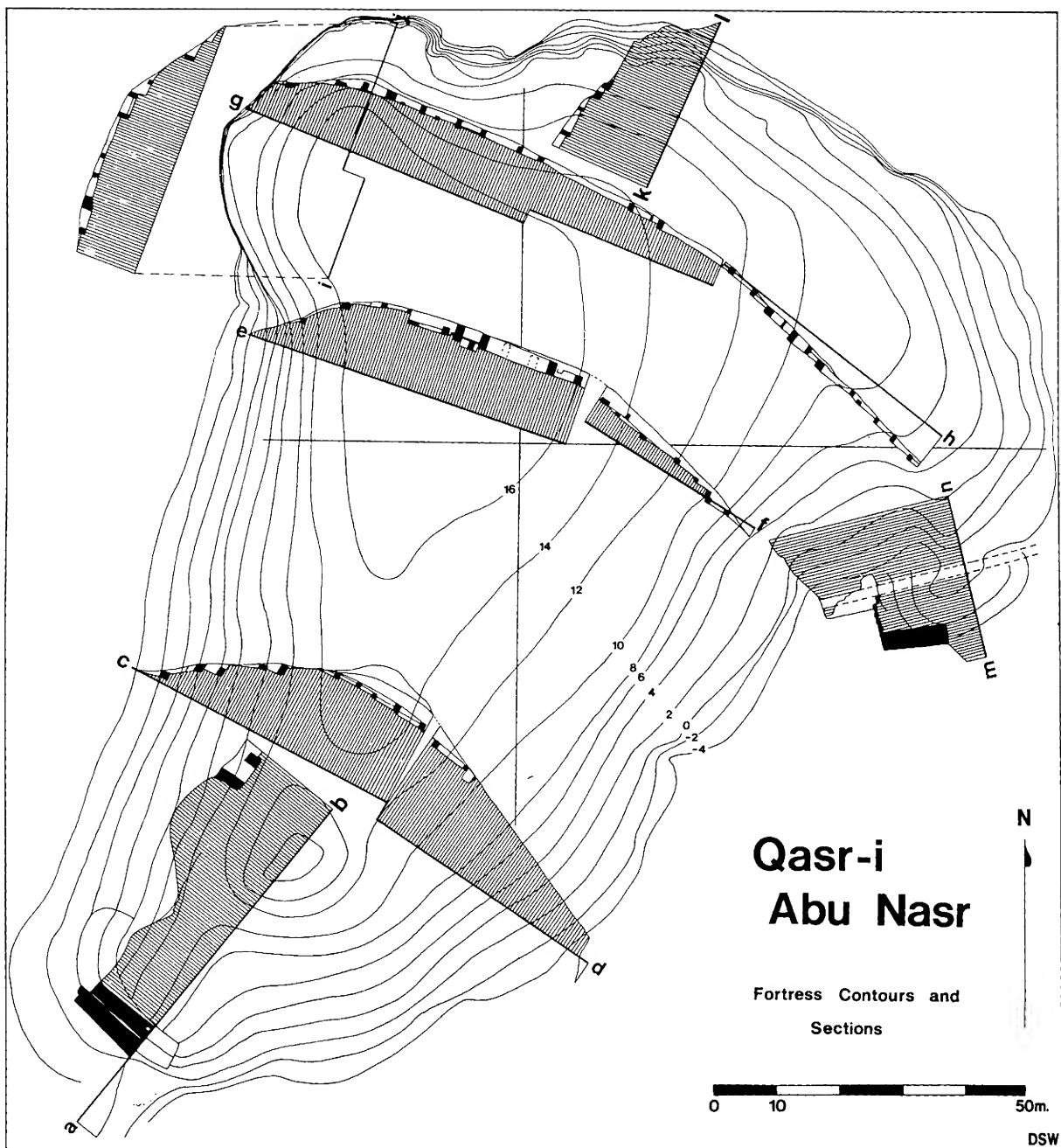


FIG. 27. Contours and sections of the fortress

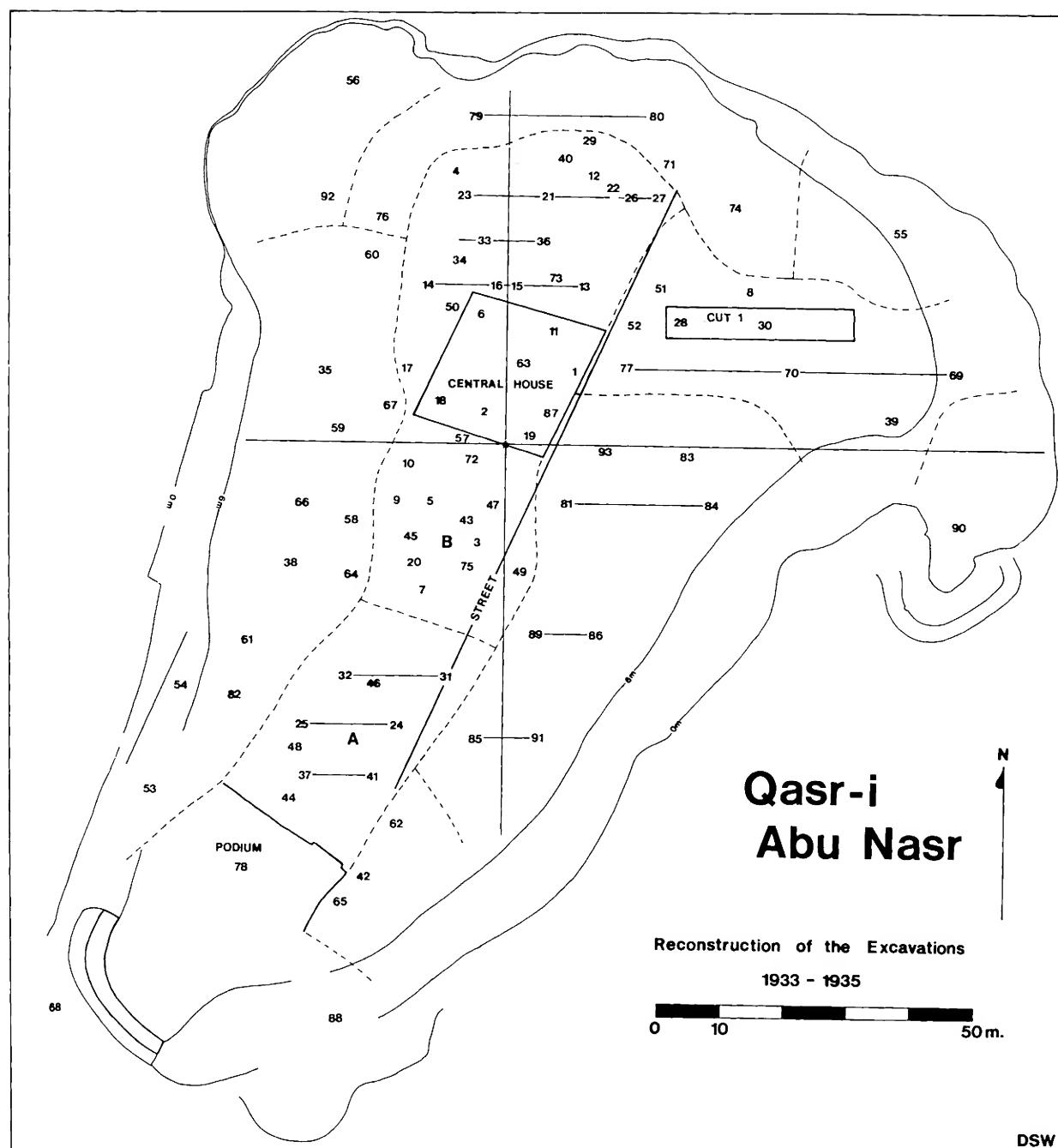


FIG. 28. Reconstruction of the excavations, 1933-35

structure (Fig. 28; see below, Fig. 30). Five stone walls, each about 1 meter in height, lie west of the main north-south street. East of the street are wall stubs of mud-brick buildings (Locus 62) extending to the eastern bluff beyond Point d. Unfortunately this style of post-factum section conveys little information concerning stratigraphic relationships within the excavated area. The most that can be said is that there is no apparent superposition of walls in the area cut by this section.

The northern part of the fortress may be divided into a northwest area, including the Central House, and a northeast area, the dividing line being the main north-south street (Fig. 28). The Section e-f cuts through both of these areas, running parallel to Section c-d. As in the previous section, fragments of stone walls occur on the lower western slope, here perhaps also connected with the defensive perimeter (North Wall) of the lower town. At the western edge of the summit the records indicate two stone walls (Locus 35) and three mud-brick walls at a lower level (Locus 67), suggesting multiple building phases in this area. In a similar manner an earlier wall was found below the floor of the Central House (Locus 18), clearly indicating an earlier occupation prior to the construction of this massive brick building. This section continues into the northeast area crossing the stubs of stone and mud-brick walls to Point f (Locus 84). Again an indication of the stratigraphic relationship of building phases is evident in the shallow wall stubs of the Plaster Building (Locus 93), immediately east of the street.

The northernmost of the east-west sections, g-h, lies across the widest part of the fortress. Near the west edge of the cliff is a vestige of a semicircular tower or section of the defensive wall. The section illustrates the walls discovered in both the northwest and northeast areas. Further information on the contours and depth of excavation in the northwest area is provided in sections i-j and k-l. Finally Section m-n provides a clear illustration of the well on the northeast periphery of the fortress. The well shaft, which was square in plan, was cut through an overhanging ledge and then down into the mountain to the water table. Below this natural overhang a semicircular stone bastion, approximately 10 meters in height, protected the area around the lower mouth of the well. The large width of this well, over 1.5 me-

ters, suggests that this may have been the main supply of water for the fortress, though some other purpose might also be proposed.

The site plan features a sequence of numbers (1-93) placed in a seemingly random fashion (Fig. 28). These numbers appear to represent area designations assigned during the course of the excavations and will be referred to here as "locus" numbers, although modern archaeological usage of that term implies a smaller, more discrete depositional unit. The size of the areas indicated by these numbers varies immensely, from areas in excess of 10 meters square to deep soundings less than 2 meters square. These locus numbers presumably match numbers associated, too infrequently, with artifacts and with personal names — presumably of pick men who worked in the particular locations (Fig. 29). Correlation of names and numbers with excavation areas might have led to more specific location of artifacts. Unfortunately occurrence is too random, movements of named individuals too erratic, and vertical location (stratification) entirely absent. Also missing is a daily logbook or diary providing the key to this fragmented information.

The procedures of the excavation can be reconstructed to a limited degree. The key to this reconstruction is the mention of "Cut 1" somewhere on the top of the fortress. Locus 28 is described as being at the west end and Locus 30 in the middle of this cut or trench. Based on the other "cuts," located in the tower town, such trenches were 5 meters wide. The length of Cut 1 would have been twice the distance between Loci 28 and 30, or approximately 30 meters. The important feature of this trench was its orientation, almost exactly east-west. The principle of excavation was apparently not the square (the grid was being used as an organizing principle by E. F. Schmidt at Tepe Hissar and Persepolis during these same years) but parallel cuts, a system more often associated with French archaeologists and one that Hauser had no doubt observed in Egypt.

A parallel-cut procedure presupposes the existence of baselines oriented to the cardinal points (see Fig. 28). On the field plan a survey point, much worn, is located on the south wall of the Central Building. The wall may have been visible before excavations had begun. This point is central and high and forms the intersection of an east-west line across the widest

FIG. 29 Location designations on the fortress

West slope	East slope	A
35	42	24
38 bird's head; A	49	25 Ali Agha Shawaris
53 ramp	62	31 Hajji Ali Agha
54 Hajji Ali Agha; east side A	65 Rahim	32 Ali Agha Shawaris
58	81	37
59	83 Kerim	41 T.H.; Abbas Hashimi
60	84 Ziyad	44 Hajji Askar
61	85 Kerim	46 Mirza Husein
64	86 Rahim	48
66 Mirza Husein	88 Rahim	
67	89 Hajji Ali Agha	
68 gate area	91	
82 Ziyad	93 Plaster Building; Kerim	
Central House		
1 Haidar; Ali Akbar; Jafar		
2 room with piers; Kerim; A		
6 Ismail; A		
11 Hajji Askar; Ibrahim		
18		
19		
63 Ali Masum Ali		
87 Ibrahim		
North slope		
56		
71		
74 Mirza Husein		
76		
79		
80		
92		
Northeast slope		
8 Ziyad; Ali Askar's burnt room		
28 Cut 1, w. end; Ali Masum Ali		
30 Cut 1, middle		
39		
51		
52		
55		
69 Hajji Riza		
70		
77 Rahim		
90 eastern well		
Podium		
78 F.A. (fire altar)		

portion of the site and a north-south line almost the entire length. The quadrants resulting from these baselines do not seem to have been used for organization. Rather the north-south baseline was used to set out east-west cuts or trenches. The nature of these trenches is problematical, since it seems that such controls yielded to a flexibility according to the architecture encountered. Remnants of this underlying principle may be seen in the examples of sequential or almost sequential numeration connected by lines on Figure 28; these are generally about 8 meters apart.

The cuts help to establish the sequence of areas excavated. Loci 1 and 2 are located within the Central House, strongly suggesting that the outlines and perhaps individual rooms were evident surface features before excavation. As mentioned above, the archaeologists used architectural features both as orientations and as goals in digging. It is evident from the distribution of locus numbers that the workers were divided into two work teams. Group I began excavating Area B immediately south of the Central House (Loci 3, 7, 9, 10), while Group II excavated within the house and conducted probes on the north side (Loci 4, 6, 8, 12). Next, Group II excavated a cut immediately north of the Central House (Loci 13, 14, 15, 16), while Group I shifted to the southern half of the Central House (Loci 17, 18, 19) and a further locus in Area B (20).

This separation of groups increased efficiency. Group II, encouraged by the finds in the burnt room (12), excavated a second cut on the north side (21, 22, 23, 26, 27, 29); this was followed by Cut 1, growing out of Locus 8 (28, 30). Meanwhile Group I moved further to the south into Area A, which was organized into two short cuts (24, 25; 31, 32). From this information it seems that Group II was the larger and better controlled, using a system of long cuts to probe for further architectural remains on the northern side. Group I was generally content to wander over the slightly mounded ridge south of the Central House, which was loosely divided into Areas A and B. This first phase of the excavations may have occupied November and December of 1933.

The second phase of excavation is more difficult to determine. Group II excavated the area between its two previous cuts (33, 34, 36) and probably then moved south of the Central House to clarify prob-

lems in Area B (43, 45, 47, 49). Probes were also conducted on the north (40), west (35), and east (39). Group I had continued in Area A (37, 41, 42, 44, 46, 48) and had probed the western side (38). A room in Locus 49 is described as the last of the season. Areas outside the northwest (50) and northeast (51, 52) corners of the Central House were followed by excavations of the northwest (56) and northeast (55) edges of the site itself. The western slope was uncovered at this point (53, 54) and the west side of Area B was extended (58, 59, with 57). Finally probes on the west side (60), an extension of the east side of Area A (62), and a deep test into the earlier levels of the Central House were conducted (63). Thus, possibly by the end of February 1934, the Central House and an equal area north and west had been uncovered and the area between the face of the podium and the Central House completely explored. The removal of debris on the west slope had begun and areas of the northwest side of the site excavated.

The excavators exposed the remainder of the fortress during a third phase that probably lasted into May. This may be divided into three sequential activities. The first is the process of extension of excavated areas and deep probes (64, 66, 67, 82 on the west; 72, 73, 75 around the Central Building; 65, 78 next to and on top of the podium; and 68 at the entrance or gate area). The second is a clearance of the north side beginning with a long cut (69, 70, 77), a second cut (79, 80) and intervening areas (71, 74, 76, 92). The third aspect is the excavation of the east side of the site, which had been almost completely neglected being somewhat lower in elevation. The loci seem to suggest a series of cuts (81, 84; 86, 89; 85, 91), with extensions to peripheral areas (83, 88, 90) and a deep probe that resulted in the discovery of the Plaster Building (93). Excavation of this last locus, an extremely interesting early building, would no doubt have been expanded had it been discovered earlier; it came to light at the very end of the season, confirming the archaeological adage that the most interesting finds always wait until the last moment to reveal themselves. At least part of this third phase may have taken place in the third season (1934-35).

The anatomy of the excavations, as reconstructed, resembles nothing so much as a gerrymander. The system of cuts promoted the development of an arbi-

trary system of locational controls (imposed as a grid with balks in later excavation procedures). The primacy of architecture inspired a laxity in method. The many photographs of pots *in situ*, showing only loose soil around them, prove only that the pots were not purchased. The context of the pot, the role of the artifact as an amplification of the understanding of the depositional history in relation to the soil stratigraphy and architecture requires conceptualizations that had not been formed. As with most archaeological excavations, an understanding of the excavator's methodology reveals assumptions and prejudices and, most important, the limits of interpretation that may be drawn from his field work. However, the hard work of three conscientious individuals over several years cannot be lightly dismissed. Indeed strategies for total excavation of a large site, such as was carried out here, are still woefully inadequate. The Qasr-i Abu Nasr excavations were neither good nor bad, modern nor antiquated; they represent a stage in the evolution of archaeological technique. The excavators expected to find a small Persepolis or Ctesiphon; they found no palace, temple, or magnificent objets d'art. Their perseverance is the more remarkable and can be criticized only in failing to reach full publication (a criticism that can be leveled at the excavations of far more magnificent sites).

Architectural Phases

The fortress as an archaeological site is hardly the layer cake of superimposed strata of succeeding occupations one often conceptualizes. A more appropriate metaphor might be the hedgehog, with its round body covered by a thin but prickly mass of spines. As the excavations at Qasr-i Abu Nasr are preserved in the extant record, the surface of the fortress seems just that sort of tangled mass of spines with little depth. This report will attempt to demonstrate that the Sasanians probably did not live in such a tangled mass of buildings (no matter how exaggerated our impression of Middle Eastern cities may be). Rather the record presents us with the remains of a town that had grown and changed over at least three distinct periods and many more subperiods, approaching a continual process of decay and renovations. This entire historical process is conflated into a

single picture. The separation of architectural phases during the process of excavation is a difficult task; the separation of superimposed (and to some extent dynamic) images into discrete (and static) phases is impossible. The phases presented here constitute a reasoned hypothesis but represent only one of a multitude of images that might have been created. It pushes the data further than it should be pushed, with the result, it is hoped, that some clarification of the processes of urbanization in this site might be achieved and find application in other excavations.

The architectural remains are most complex in the northwest area, where the depth of deposition seems to have been the greatest. The excavators recognized the existence of at least two building phases. The lower, or earlier, phase was described as being "better built, being stone set in plaster or of good mud brick The upper level . . . is built of field stone set in mud as mortar or of layers of mud (*chine*) piled up on a footing of two or three rows of stone" (BMMA II, 6-7). This separation may have been evident and recognizable during the excavations but is indefinable on the basis of surviving records. There exists a tracing of the survey plan indicating stone wall foundations, which generally seem to belong to the lower level. Walls made of mud brick are also indicated on the same tracing. There is no attempt to indicate to which level these mud-brick walls should belong, and some of the stone walls seem to belong to the upper level. This situation is further complicated by the possibility that stone foundations, built for mud-brick buildings, were mistaken for walls constructed entirely of stone.

The architectural phases of the fortress, whether two or more, are fundamental to the interpretation of the artifactual contents and the site itself. The impression of extreme density of settlement and of interlocking building units is the result of a lack of clear definition of the occupational phases (Fig. 30). Hauser makes a crucial observation in this regard: "There seems not to have been any destruction which demanded a general rebuilding but rather a gradual transformation as time necessitated repairs and reconstruction" (BMMA II, 6-7). This pattern is, naturally, the usual situation within urban or most other settlement types.

The following separation into architectural phases is based on the hypothesis that during each phase of



FIG. 30. Plan of the architecture of the fortress



FIG. 31. Early architectural phases (Phase 1a-c) on the fortress

construction there existed some form of imposed pattern or cadastral principles. This resulted in the planning of the settlement in an orthogonal pattern, with most walls falling into common orientations, either north-south or east-west. It is further hypothesized that each phase (or period) repeated this same cadastral pattern but with different orientations. The problem is to assess how much the building orientations were determined by the irregular limits of the mesa. Certainly from the Achaemenid period through the Sasanian period, the broadest limits of occupation of the site, the orthogonal principle of town planning predominated in the Near East as it did in the Mediterranean world. In the Sasanian period, one of great urbanization within Iran, the orthogonal town plan was rigorously followed (with the exception of a few circular aberrations).

This range of comparisons (which will be elaborated later) is based upon such sites as Pasargadae, Persepolis (lower town), Bishapur, Jundishapur—all royal establishments with monumental buildings using some form of symmetrical organization and repeating patterns. Not only does the fortress at Qasr-i Abu Nasr lack anything that could be called monumental (excepting the podium), it seems to have no plan even vaguely symmetrical or repeating. This will be clarified through the separation of architectural phases based on the shifting orientations of the structures. The clue for this procedure was found in Hauser's observation that these builders displayed "a marked disregard of the right angle" (*BMMA* II, 6-7), a characteristic which he, as an architectural surveyor, must have found unnatural and suspicious. The following discussion of the architectural phases of the fortress, based on the segregation of walls, fragments of walls, and other lines on the survey plan, requires another caveat—the recognition of the limits of precision in the surveying and drawing. Obviously, short wall fragments necessitate at least four points of measurement taken from the basal wall face at a point where the wall is well preserved. I have taken the drawn plan heuristically as an accurate representation and usually resisted the temptation to make minor alterations. The problem of precision is compounded by the physical condition of the walls; factors such as the care in excavation, the irregularities of wall construction and repeated plaster facings, and ultimately the rigor of the orientation in the construction itself introduce variables that

all but preclude certainties. Nevertheless this analysis offers a rough superstructure for what would otherwise seem a hopeless tangle of rubble.

Thus the earliest structural remains have been divided into Phases 1a, 1b, and 1c, based on variations of wall orientation. Overlap between these subphases is usually minimal, suggesting structural juxtaposition and either near-contemporaneity or continuing presence of earlier buildings. The ensemble often makes little or no sense in terms of patterns of traffic or possible utilization. Thus the negative activities (destruction and leveling, using wall materials to fill around wall stubs and raise the general ground surface) must have occurred. In the absence of data on the stratification of such fill, building histories must lack this crucial dimension.

The earliest occupation on the fortress, as evidenced in the architectural fragments, is found in the northwestern area of the site. A number of short wall fragments were discovered where deep probes were excavated below the floors of later structures. In general the excavation team only rarely and randomly took soundings for remains of early levels and evidently made no attempt to correlate these fragments into a comprehensive plan. The fragments of these early walls maintain a somewhat irregular orientation (Fig. 31: indicated as walls with vertical hatching). The walls most confidently identified as this earliest architectural phase (Phase 1a) are concentrated in a rectangular area in the northwestern part of the fortress. This is not, it must be emphasized, sufficient to exclude isolated architectural complexes elsewhere on the site from possibly belonging to this same period. The earliest ceramics were found in deep soundings in Cut 1 and Mirza Husain's holes and along the western slope (where this early debris may have been fill for the cribbing; see below, Figs. 56, 57).

Within the northwestern rectangular area (approximately 42 x 50 meters), most of the walls are narrow structural walls, usually 80 centimeters wide. A few stouter walls, approximately twice this thickness, occur on the western periphery (west of Loci 92, 59) and on the eastern edge (Loci 11, 73). These are perhaps defensive boundaries of the settlement or, on the eastern edge, may be remnants of more substantial buildings. Recognizable architectural units are not immediately evident; the most cohesive unit is the set of rooms found in Loci 34, 50, and

14. A portion of this building was not disturbed by the succeeding architectural phases and therefore may have continued in existence well after most of the other structures had been rebuilt. Immediately east of this building are a space and parallel doorways of a second building (Locus 60). These buildings seem to form a long block north of what appears to have been an east-west street or alley (from Locus 11 to south of Locus 50 to a stub of the eastern defensive wall). South of this street there are few recognizable building fragments, except for a room (Locus 72) near the southeast corner of the rectangle.

The plan of the earliest settlement, Phase 1a, is thus necessarily fragmented and incomplete. What is evident is the division of the space into small and irregular (and probably residential) units within a defensive periphery. Evidence of a general symmetrical plan is not available. A possible comparison with the architectural details of the Tall-i Takht at Pasargadae (D. Stronach 1978) is necessarily superficial and unsatisfactory, though a contemporaneity will be demonstrated.

The description of Phase 1b may begin in the same northwestern area. The orientation of these walls is only slightly at variance with the Phase 1a walls but is more rigorously applied. It seems likely that many of the Phase 1a walls were incorporated into this rebuilding, suggesting either a short interval between the two occupations or the continued presence of the first structures. The construction of the Phase 1b walls is usually more substantial (usually about 1 meter thick), and room size generally seems larger, often measuring over 2.5 meters wide. Interestingly the east-west walls of the Central House (a much later construction) take the Phase 1b orientation and thus probably incorporate earlier walls. The isolated fragments of rooms do not seem to form patterns. There are suggestions of property lines, such as along the north edge of the rectangle (Loci 36 to 92) or through the northwestern area (from Locus 11 to south of Locus 60; from Locus 23 to Loci 14, 67). These alignments of wall edges may be fortuitous, but would seem to represent cadastral units containing the structural units (whatever they might have been).

Wall orientations of Phase 1b extend beyond the northwestern rectangle. On the northern edge of the site (Locus 79) are fragments of defensive walls that are consistent with this orientation and that may be

survivals of structures mostly replaced by Phase 1c construction. South of the rectangle there is a series of walls—perhaps extensions of walls in Locus 59—on the western slope (Locus 38) with Phase 1b orientations. The walls of Locus 38, together with Loci 61 and 82, seem to have been the upper visible structures built upon the cribbing on the western slope. Just north of Locus 61 is what appears to have been a niched doorway, perhaps the main entrance onto the site. South of Locus 82 a wall seems to have regularly spaced buttresses indicating an exterior facing. In fact this wall would have surmounted the ramp that ran from the gate area (Locus 68) to the doorway (Locus 61). It may therefore be postulated that the walls on the western slope, the ramp, and the gateway were all constructed during Phase 1b. Furthermore the great stone bastion and podium (Locus 78) may be even more tenuously attributed to this architectural phase.

The podium presents a major problem in this analysis. The orientation of its facing (on the north) bears no relationship to the vast majority of the walls (architectural units) on the fortress. For a monumental focus of the site the podium had curiously little effect on its surroundings, in terms of imposing an orientation on the whole. (The principle of a radiating focus does not seem to work either.) A few buildings on the eastern slope of the site have an orientation compatible with the podium, beginning with the rooms east of the podium (Loci 65, 42, 62). The southern walls of 85 and 91 and the walls beside and north of Locus 83 indicate a pattern of architectural units separated by open areas (although this orientation may, of course, reflect the natural slope of the ground surface). These architectural units mostly lie east of a line beginning at the eastern corner of the podium and extending north to Locus 30. The line of the street may also be projected to this same eastern corner of the podium. Within the angle of these two lines lies the Plaster Building (Fig. 32C; Locus 93). This building does not conform strictly to any of the wall orientations isolated, and accretions and overbuilding indicate that it must have been built early in the architectural history of the site. The Plaster Building must therefore belong to Phase 1b. The orientation of the Plaster Building seems to be followed by a series of pilasters later incorporated, at what becomes a very strange angle, within the large storeroom of the Central House (Locus 2).

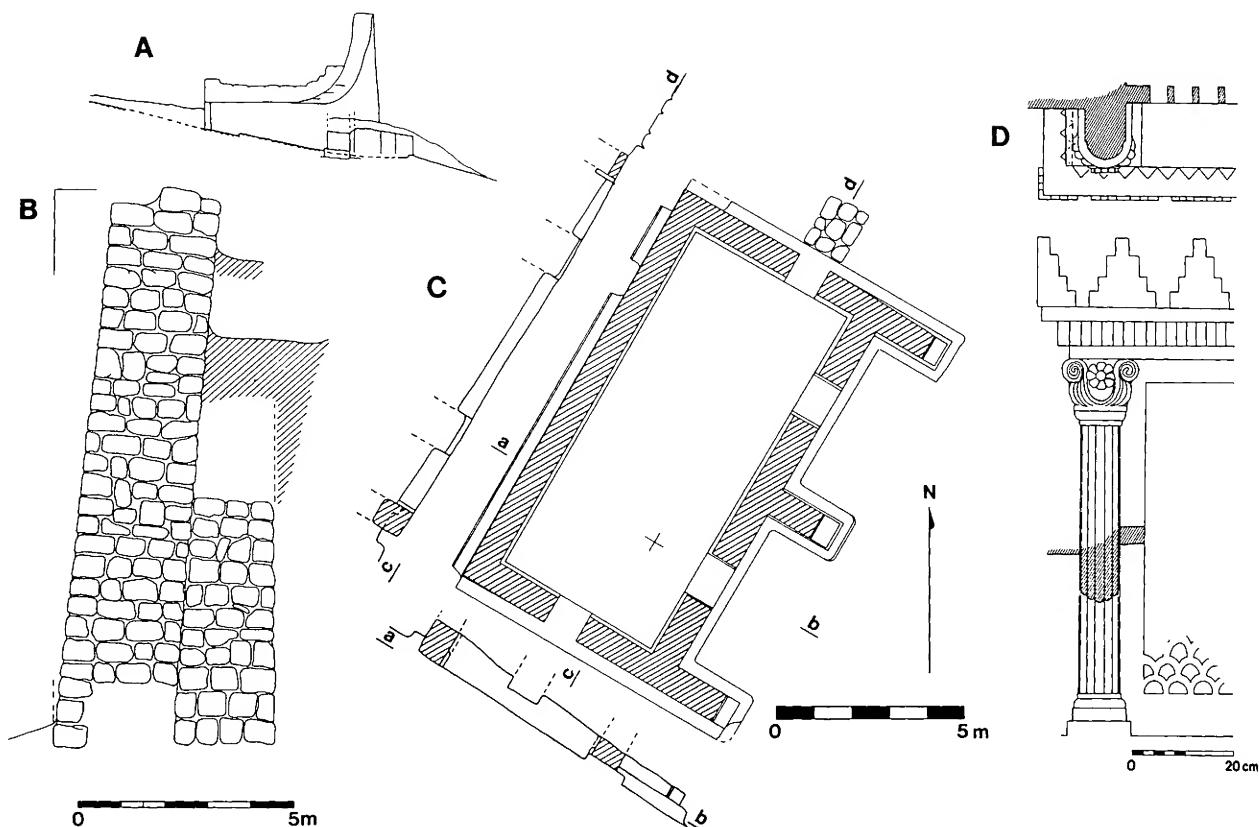


FIG. 32. Architectural features of Qasr-i Abu Nasr: A, B, the stonework of the stone bastion; C, the Plaster Building (93); D, stucco work on a window from the western area (N11)

The resulting configuration of settlement during Phase 1b shows the podium's western walls and eastern building units fringing a large empty court (the rooms at Locus 25 may have partially interrupted this open space). The occupation seems most dense in the northwestern area, as it had been in the previous phase, with some expansion to the northern edge of the site. The northeastern area contained isolated buildings, perhaps including the eastern periphery (Locus 69). The Plaster Building and row of pilasters suggest a formal, ceremonial focus in the center of the settlement, though this is obscured by the subsequent development. This rather unusual building is paralleled by the central altars at Dahan-i Ghulaman in Seistan, provisionally dated to the fifth or sixth century B.C. (Fig. 33; Scerrato 1966, 12–18).

The succeeding phase, Phase 1c, appears to have been an infilling of the intervening space on the northern part of the site. A new orientation for the

architectural remains seems dictated by the line of the street and a perpendicular axis (from Locus 56 to Locus 30). A few walls of this orientation appear to have penetrated the original rectangular area (as at Loci 92, 72). The interstitial nature of this expansion suggests that there was either a continuation of occupation or a small interval between the two phases. For the first time identifiable building units may be seen, as in the rectangular building of at least six rooms (between Locus 92 and Locus 56) or the smaller, more numerous rooms (Loci 21, 40, 26). A third building complex lies off the main street (Loci 51, 28), separated by an alley (Locus 52) from additional structures (Locus 77). North of Locus 51 there are further rooms of the same phase (Locus 74), again separated by a narrow alley. Between the two alleys mentioned, the clearest building unit—a set of four rooms (Locus 28) with doorways giving an idea of circulation—is visible. The large room (Locus 51)

may be an attached courtyard. The rooms at Locus 56 may be a larger version of this pattern. The building at Locus 21 seems to be of a different pattern with at least four rooms longitudinally arranged and backed by further rooms (Locus 40). The heavier walls (almost towerlike) suggest yet another type of structure, seemingly duplicating the building north of Locus 85 and that south of Locus 69.

On the eastern slope, walls with this orientation (at Locus 62, north of Locus 91, and between Loci 81 and 84) suggest expansion of existing buildings. The northeastern area (between Loci 30 and 39) may also represent an expansion of architectural development into this area. The buildings at Locus 39 present longitudinally arranged rooms of larger size, comparable to those at Locus 56. In sum this architectural phase is an expansion into available space of individual building complexes (usually about 16 me-

ters square) with various room patterns. Thus, while the allocation of space seems to be controlled cadastrally, there is little standardization of buildings. The character of these buildings seems to be more of a residential than centralized official nature.

Phase 2a of architectural development on the fortress represents a dramatic break from the preceding architectural accretions. A new general orthogonal plan was superimposed over the entire town and in every section walls were constructed according to this new layout (Fig. 34). How one might impose a new orientation for all construction within an existing town is a serious question. (*Why* might be another good question.) Such an "urban renewal" might be facilitated, as well as necessitated, by an at least partially ruined or abandoned site; this argues, in archaeological terms, for a substantial break in occupation of the fortress between Phases 1c and 2a.

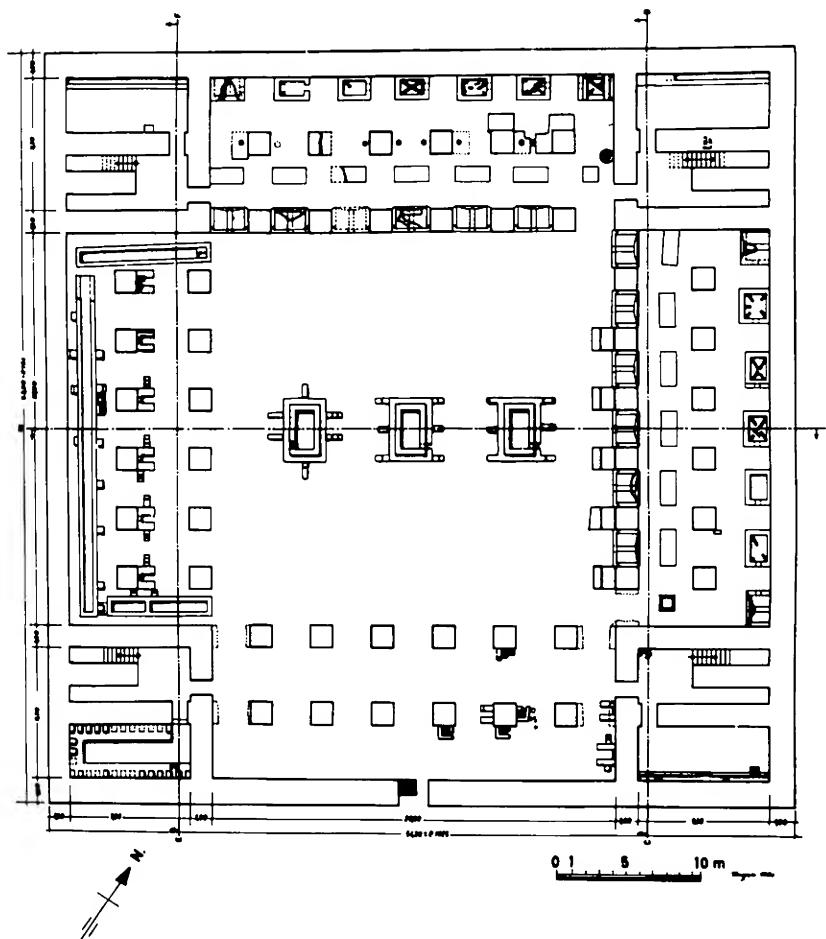


FIG. 33. Plan of Building 3 at Dahan-i Gulaman in Seistan.
After Scerrato 1966, fig. 9

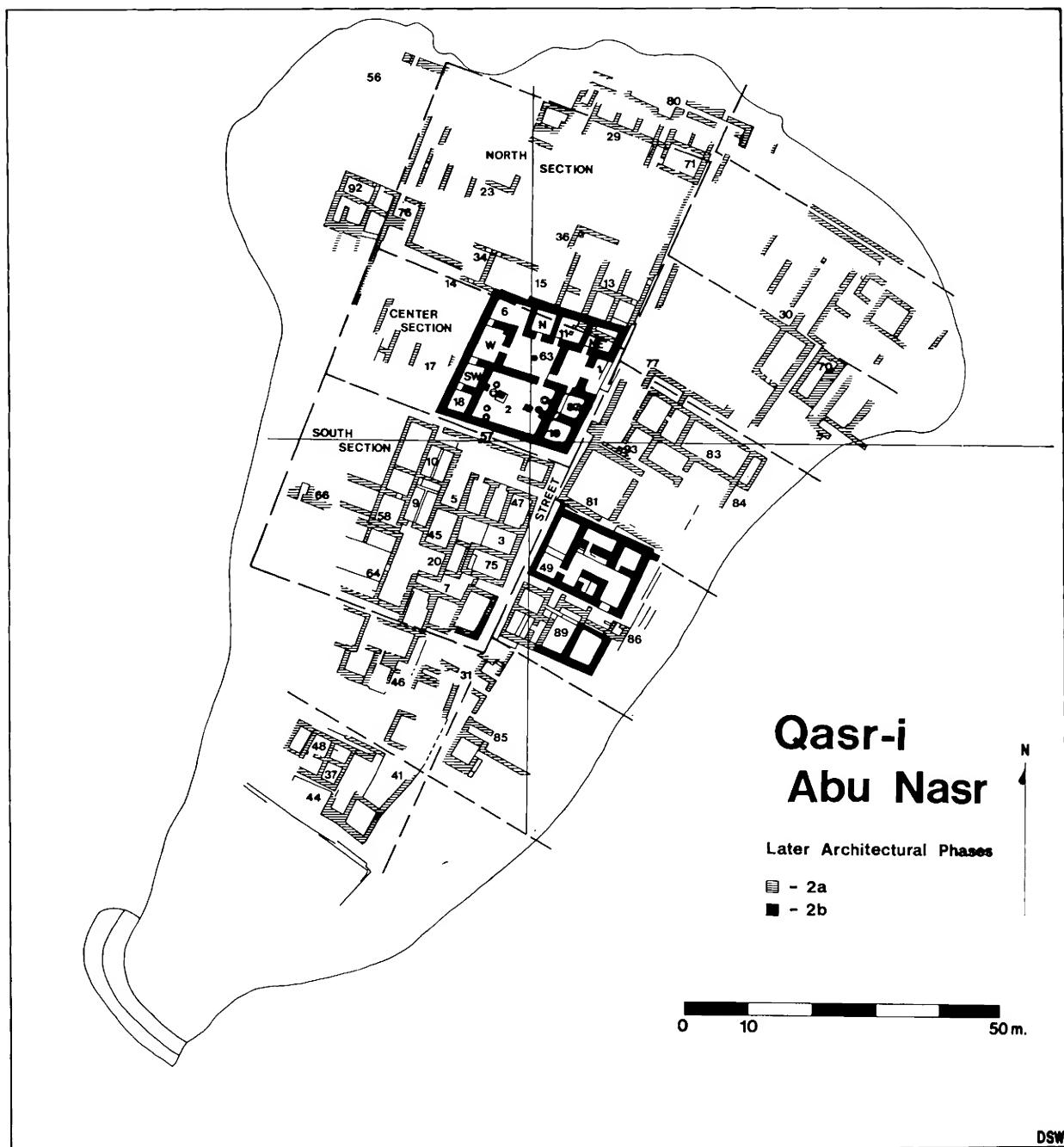


FIG. 34. Later architectural phases (Phase 2a, b) on the fortress

Whether or not there was a chronological break, the implication of this new plan is that there was a break in the social structure of the town, perhaps from political causes. The result was a redefinition of properties based on a new cadastral survey; henceforth the properties followed the new boundary lines. An examination of the nature of the new constructions, in comparison with those of the first architectural phase, suggests that the function of the fortress (and probably the makeup of the population) did not alter radically. As an example of "urban renewal" this town planning shows the superficial and temporary improvement that seems to have characterized many later attempts.

The town plan begins with the central axis of the main street, inherited from the first phase, running from the eastern corner of the podium to the north edge of the site (near Locus 80). West of this axis a rectangle (approximately 43 x 86 meters) was laid out and divided into three sections: northern, central, and southern (within Area B, as excavated). The central section of the rectangle appears to have been left open (except for a few walls at Locus 17), and the Central House appears to be a Phase 2b addition filling this court. One must therefore attempt to imagine Phase 2a without the imposing Central House.

The northern and southern sections of the rectangle present a strong contrast. The northern section has relatively few walls with the new orientations, and those are mainly around the periphery of the section, because of the continuing existence of Phase 1c structures in the central portion. Thus Loci 29 and 71 may be viewed as additions onto existing structures. The rooms at Locus 13 seem to be reconstructions of early buildings. The towerlike building at Locus 92 lies outside the rectangle and seems to include boundary walls. The southern section, by contrast, is completely filled with building complexes of Phase 2a, with fewer walls actually marking the section boundaries—no doubt because the area was open in the preceding phase. Unfortunately, the pristine nature of the second section does not help at all with the problem of understanding this maze of walls and rooms.

Description of the southern section may begin with Locus 64, where a small central door bisects a large room with paved sides, cut off by erosion on the west. This room is the closest approximation on the site to an iwan, present in nearly all Sasanian set-

tlements. The iwan opens onto an irregular space (Locus 20), which in turn leads into a pair of rooms (Loci 9, 10) called the "Armor Room(s)" because of the section of armor plating found between them (see below Fig. 63ee). Both rooms are plastered and have low, plastered sills or curbs dividing them into sections. They are probably storerooms, although their precise function is unknown. Rooms 9 and 10 are backed on the west by a second series of rooms (including Locus 58) which probably had a similar function. East of Rooms 9 and 10 is a building complex that has an entrance from the main street (near Locus 47) and a series of rooms off a hall (including Locus 5). Rooms to the south of this complex may be an extension or belong to a second building complex with a separate entrance (south of Locus 75). This complex includes Loci 3 and 45. The irregular space (Locus 7) may have given access to the three rooms to the south.

Locus 3, also known as Ismail's burnt room, probably named after the pickman who discovered it, produced a number of clay sealings (Appendix A: 4, 6), as well as a small crystal head (see below, Fig. 73d) and a "bronze pointed hoof" (see below, Fig. 62m) (*BMMA* II, 8, fig. 7C). A second burnt room (Locus 8, north of Locus 30), in the northeast part of the fortress, was known as Ali Askar's burnt room. This likewise produced a collection of sealings (Appendix A: 13), the tripod candlestick (Frye 1973, 18, fig. 16), and a quantity of metal and other artifacts (*BMMA* II, 8, 22). The contents of these rooms, particularly the sealings, indicate that they belong to the second period and most likely to Phase 2b, an early Islamic assemblage. The destruction of these two rooms seems to have been unusual, since no other rooms or loci are mentioned as "burnt"; it is apparent, however, that this evidence relates to events tied with the final abandonment of the fortress, well after the Arab conquest.

Immediately south of the southern section of the rectangle are fragments of large rooms which continue the orientations of the rectangle (Locus 46). Further south is a small building with four rooms (two of which are Loci 48 and 37) and subsidiary rooms (Locus 44) which take the orientation of the face of the podium. This orientation is continued on the eastern side of the site, first with Locus 85, which seems an interstitial filling of the space be-

tween earlier buildings. The building at Locus 89 apparently follows the same orientation and spatial limitations. The portion of this building belonging to Phase 2a seems to comprise rooms off a narrow corridor, although admittedly this complex is extremely difficult to read from the recorded evidence. It is possible that part of this building was razed for the Phase 2b building to the north (Locus 49).

The eastern side seems to have been separated into sections leading off the axial main street; the cadastral units used here are still elusive, however. The northeastern area can be divided into three sections. The southern section has a large square room or court (Locus 81) and a complex of large rooms (Loci 83, 84) constructed over and obliterating the earlier Plaster Building (Locus 93). North of this complex is an alley (beginning near Locus 77) that may form a boundary of this section. The remaining two sections seem to be large rooms (around Locus 30) as partial reconstructions of earlier northeastern buildings (Locus 70 may have been a cistern). No general plan seems discernible from the fragmentary remains in this area.

The town plan for Phase 2a is presented as a simplification of only those walls and rooms added during this reorientation. Many whole building complexes from the early phase continued, and the settlement density probably resembled that of the southern section of the rectangle. It seems equally probable that areas were left open as courts, although the locations are now impossible to determine. There may also be a lingering question of the contemporaneity of the development of the rectangular area and the eastern area. Further, the isolation of a subdivision of the second phase is an important development in the history of the site. The approach here has been conservative; the Phase 2b buildings are confined to two structures, the Central House and eastern building at Locus 49.

The Central House is easily the most substantial feature other than the podium within the fortress. Its massive walls were well preserved, forming a mounding that initially drew the excavators to this feature. The plan is surprisingly straightforward, especially in comparison to the fragmentary and tangled architecture of the preceding phases. Judging from the state of preservation, orderly plan, and artifactual evidence the Central House can be considered one of the last constructions on the fortress.

The thick mud-brick walls of the Central House extend for approximately 22 meters on each side. In contrast to the walls the doors are very narrow, usually less than a meter wide. The massive nature of this structure suggests that it had a second story. The most singular feature of the Central House as a unit is the geometry of its plan: it forms a rhomboid rather than a square. The reasons for this may be twofold: first, as suggested above, a number of foundations of Phase 1b walls may have been used for the east-west walls imparting this orientation to the later structure (the north-south walls follow the orientation of the axial street); second, the builders may have been confined by the borders of a previously open area (though this does not seem to have prevented the partial razing of Phase 2a walls for the north wall of the house). The reuse of earlier architectural features may also be seen in the pilasters (and piers) within Room 2, which follow the orientation of Phase 1c rather than that of the room.

The approach to the Central House was from the main street through a wide porch (Locus 1) and doorway ornamented with patterned plaster (these parallel lines may have been decorative or the foundation for a final decorated coat of plaster). The entrance, almost 2 meters wide, opened onto an anteroom (3.4 x 6 meters). On either side of this anteroom narrow entrances led to small rooms, the NE Room (designations for rooms must combine directions with existing locus numbers) on one side and Rooms 87 and 19 on the other. It is tempting to visualize the wall blocking the anteroom from the central court, with its off-center doorway insuring privacy, as a later addition. Without this wall, one could enter a long central hall or court (Room 63) with a second set of flanking doorways leading to Room 11 and to the large storeroom (Room 2), also called the "room with piers." The court, or hall, had a small well in the center, focal to the two doorways leading into the north and west rooms. The north room is distinctive in that its walls appear from the drawing to be parallel and at right angles to the north wall and thus would depart from the rhomboidal shape of the building. The west room has entrances to Room 6 (also entered from the court) and to the SW Room and Room 18.

The southern half of the Central House has two pairs of small rooms flanking the large storeroom (Room 2). This room, measuring 8 x 10 meters, had

two square piers, one with a plaster footing, and two pilasters of the same size in alignment bisecting the space of the room but at an awkward angle. Within the room were ten large storage jars, or *pithoi*, scattered about and buried into the floor; one of the wooden beams from the roofing was also found between the piers.

The plan of the Central House reveals an interest in symmetry and pattern. The building is divided into northern and southern halves. The entryway is axial (especially without the blocking anteroom wall) with the court and the west room. The court is flanked with symmetrical sets of doorways. The periphery is thus devoted to small rooms, which may be presumed to have served primarily for storage, and one large storeroom. The point of access to the upper story is unknown; Room 6 is a likely location. The upper story would have had further rooms, probably grouped around the open court, which would have functioned as a light well. It may be further surmised that above Room 2 was a large hall or iwan.

While a vaguely similar plan occurs in the central portion of Tell Dhahab in Iraq (J. H. Schmidt 1934, fig. 2), the closest parallels to this building may be found in the houses of Istakhr and Siraf (especially Siraf 1970, 10.4, 5, House N). While these houses may date as many as two centuries after the probable date of the Central House, features of the two are strikingly similar. The houses stand as isolated units wherever possible; they have a long court from the entrance and small rooms on either side and at the end of the court. Walls are generally thick, usually suggesting to the excavators that they supported a second story. The upper story apparently held the private apartments of merchant families, while the lower storerooms were devoted to merchandise and may indeed have functioned as small *khans*, the loci of wholesale and retail transactions (Whitcomb 1979a).

The function of the Central House may have been somewhat similar. As a unique and imposing structure dominating the fortress during the last phase of its occupation, it almost certainly would have belonged to the governor or merchant-leader of the town and as such would have been the center of administrative and economic functions.

The Central House is not, however, completely unique among the structures on the fortress but may

be compared to the building at Locus 49. This building has the same massive walls and narrow doorways. The entrance leads into a court, in turn giving onto three peripheral rooms and a small isolated room against the south wall. This may be a smaller version of the Central House, but the overall plan is quite different. If the similar walls near Locus 89, as well as the confused complex of walls to the west, belong to this house, the preserved structure may be only the northern half of a building comparable in size to the Central House. Again this building at Locus 49, oriented with the main street, may represent a later architectural style built upon ruined or undeveloped portions of the town. One might have expected a slow redevelopment of the fortress with such buildings had the site not been abandoned.

In summary the architectural phases of the fortress began with the early vestiges seemingly confined to a northwestern rectangle, Phase 1a. This was followed by a redevelopment of this area, the addition of peripheral structures and the major constructions of the stone bastion, gateway, and defensive walls, Phase 1b. The next phase, Phase 1c, resulted in the gradual filling of the available spaces on the north of the site and some development of the eastern slope. The southern portion of the fortress until this time was probably an open area before the podium.

With the second phase, Phase 2a, the space within the fortress was reorganized; a large rectangle was laid out and divided into three sections, incorporating earlier buildings in the north and constructing a new complex in the south, and the eastern area (separated by the axial street, probably itself a product of Phase 1c) was divided into parallel sections. Finally, in Phase 2b, two major buildings, the massive Central House and the eastern building at Locus 49, which were constructed in a new "monumental" style, were added to the plan of the settlement.

There remains the identification of this sequence of architectural phases within a historical framework. Given the tentative basis of this phasing, the hypothetical nature of this periodization cannot be overstressed. The suggested periods are strengthened by consideration of the artifactual contents of the fortress, especially the ceramics. It must be remembered that, in the absence of locational and stratigraphic controls, artifacts cannot be correlated with the architecture (the notable exception is the presence of the *pithoi* in the Central House). The suggested periods are:

Phase 1a	Post-Achaemenid, probably late Parthian, ca. A.D. 100-ca. A.D. 250
Phase 1b, 1c	Early Sasanian, ca. A.D. 250-ca. A.D. 400
Phase 2a, 2b	Late Sasanian, early Islamic, ca. A.D. 500-ca. A.D. 750

Confirmation of this dating may begin with an inquiry into the comparisons for the fortress as an entity, its plan and structural remains.

Architectural Parallels

The fortress at Qasr-i Abu Nasr was first of all a fortress — that is, a defensive settlement. The fortress is listed by Vanden Berghe as a category of Sasanian remains (1966, 239, no. 4); while perhaps typical, such structures are not distinctive to this particular historical period. Defensive settlements were repeatedly established during periods of relative insecurity or limited centralization of government. As regional centers of power, fortresses were the natural focus for administration and for rebellion by strongmen (or "kings") from the Achaemenid through the Sasanian periods. Indeed the Sasanian dynasty began with the uprising of Ardashir at Jur (Firuzabad). The *Shiraznameh* praises the government of the atabeg Chauli for ending the frequent rebellions in Fars province by razing the numerous regional fortresses (Ibn Zarkub Shirazi 1932, 16; Le Strange 1912).

Many fortress sites have been mentioned by various authors (and many more known), but only a few are published and adequately described. The fortress above the city of Isfahan was obviously occupied repeatedly in the long history of that city and is of great importance to the understanding of the city (Minasian 1971). Likewise the "citadel" above the site of Siraf is crucial to the understanding of that city (it is also suggested to have been Sasanian; Whitehouse 1975, 187). The excavation of a fortress and its publication is an extremely difficult undertaking; it has been accomplished systematically and with great success only by the German archaeologists investigating Urartian sites in Azerbaijan. For most fortresses repeated occupation within a confined space produced a complicated stratigraphy that, compounded by an abundance of crude and often lit-

tle-known ceramics, makes understanding of the internal dynamics of the settlement difficult at best. Comparisons between sites are further limited by the adaptation of settlement patterns to the natural contours of the site. Finally the fortress usually exists within the context of a lower town; too often one of these interacting elements receives less attention than the other. Most excavations attend to the town in preference to the fortress, the opposite of the situation at Qasr-i Abu Nasr.

The fortress that compares most closely with Qasr-i Abu Nasr is that of Qal'eh Dukhtar at Firuzabad, known through the recent reports and excavations by the Deutsches Archäologisches Institut (Huff 1971; 1974; 1976; 1978). The site of Qal'eh Dukhtar lies on a mountain spur overlooking the river gorge and road to Shiraz; not far from the fortress the ruins of Jur (Firuzabad) begin. Unlike Qasr-i Abu Nasr, Qal'eh Dukhtar is dominated by a single monumental building, the so-called palace. Although the palace is much larger, a comparison might be made with the podium (Fig. 35). The semicircular bastion is similar to the circular section of the palace; the terrace in front of this part of the palace has a vertical face, and the walls have buttresses (as at Qasr-i Abu Nasr, Locus 82); these features do not add up to a portrayal of the podium as a small palace, but the possibility remains.

The enclosed area around the palace at Qal'eh Dukhtar is about 170 x 100-130 meters, the same general size as the Qasr-i Abu Nasr fortress. The walls at Qal'eh Dukhtar continue to follow the spur, making the total enclosure approximately twice the size of its palace compound. Points of comparison may be found in these defensive structures: the semicircular towers at Qal'eh Dukhtar may be paralleled at Qasr-i Abu Nasr (Locus 56); the casemate walls are similar to those at Locus 55; two lower defensive spurs at Qal'eh Dukhtar parallel the inner defenses at Qasr-i Abu Nasr, south of the fortress gate; and rectangular wells drilled into the extremity of a spur are found at both sites. The excavations at Qal'eh Dukhtar (Huff 1974, fig. 6) have revealed that the enclosed area contained building complexes that, in their fragmentary and irregular orientations, superficially resemble the constructions at Qasr-i Abu Nasr.

The features mentioned in the comparison of these two fortresses might be little more than coincidental were it not for the fact that the artifactual remains

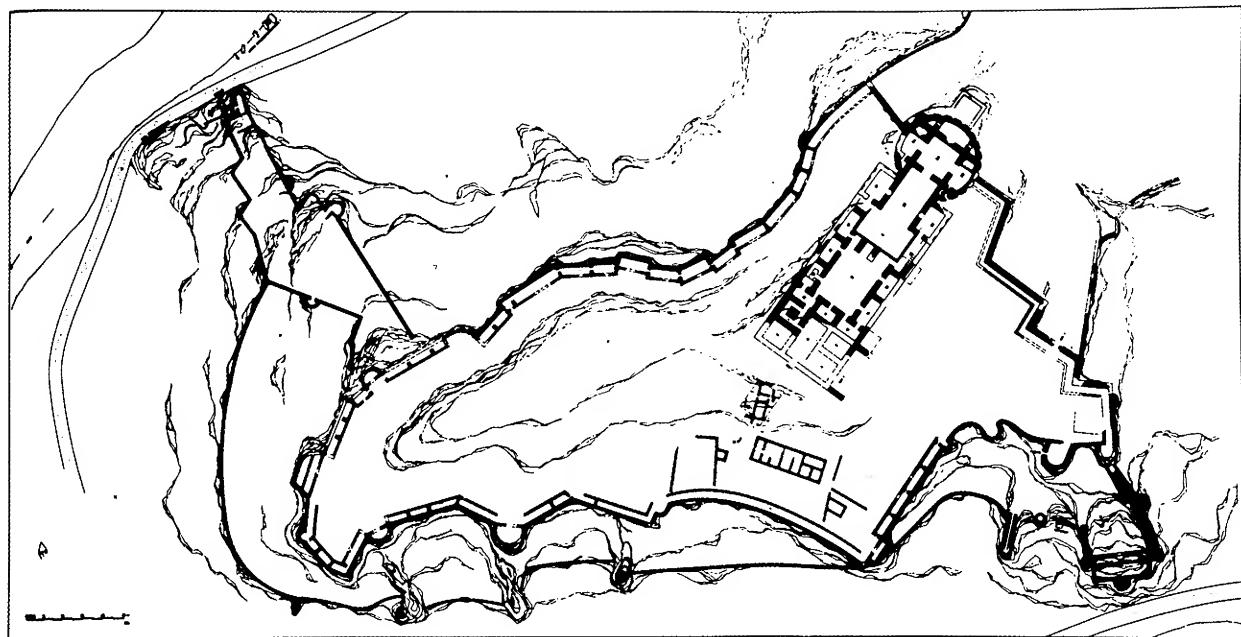


FIG. 35. Plan of the palace and main fortifications at Qal'eh Dukhtar, Firuzabad. After Huff 1976, fig. 8

from Qal'eh Dukhtar, with the exception of a few small objects, closely duplicate the artifacts at Qasr-i Abu Nasr; some of the ceramics are the closest parallels reported. Huff suggests that Qal'eh Dukhtar, traditionally considered a construction by Ardashir, is early Sasanian with later occupations. The fortresses are thus both contemporaneous and analogous in morphological detail; the major difference is the palace and the enigmatic podium.

The second major fortress known from Fars province is the citadel at Bishapur. Ghirshman produced a plan of this fortress, the citadel above the Sasanian town of Bishapur, although he does not seem to have excavated or examined the citadel in detail (Fig. 36). The citadel seems to divide the slope rising from the town into three terraces (the opposing side falls off in sharp cliffs). The upper terrace is somewhat smaller than that at Qasr-i Abu Nasr, with one end taken up by a large construction with two circular corner towers and two semicircular towers. This structure would thus seem very different from the podium, although its placement is roughly analogous. It is evident from photographs of the slope (1971, pl. 8.2) that the three terraces were covered with buildings, none of which have been planned. Like those at Qasr-i Abu Nasr, the defensive walls of the lower

town lead up to, and are incorporated into, the fortress or citadel.

The third major city of central Fars province during the Sasanian period was Istakhr. Not far from Istakhr in the Marvdasht plain is the Kuh Istakhr, a high mesa upon which is a great cistern and ruins claimed to be Sasanian (Vanden Berghe 1966, 27). Closer to Istakhr is the site of Naqsh-i Rustam, the cliff face within which are the royal Achaemenid tombs. Although the fortified terrace in front of the tombs was excavated by E. F. Schmidt in 1936, the full context of the site is known only from a sketch map by Kleiss (Fig. 37). The mountain is a steep-faced, roughly triangular spur of Husain Kuh. The column and other rock-cut features were known before; Kleiss added the vestiges of buildings on the top of the mountain, including what appears to be a major structure at the narrowest (northernmost) point of the spur. The location of this building and the shape of the spur are roughly analogous to those of the podium and fortress. Further, the terrace and its wall with round towers are similar to the inner enclosure at Qasr-i Abu Nasr. The excavations by E. F. Schmidt showed that the Achaemenid remains were enclosed by the terrace occupations during the Sasanian and early Islamic periods (1970). The

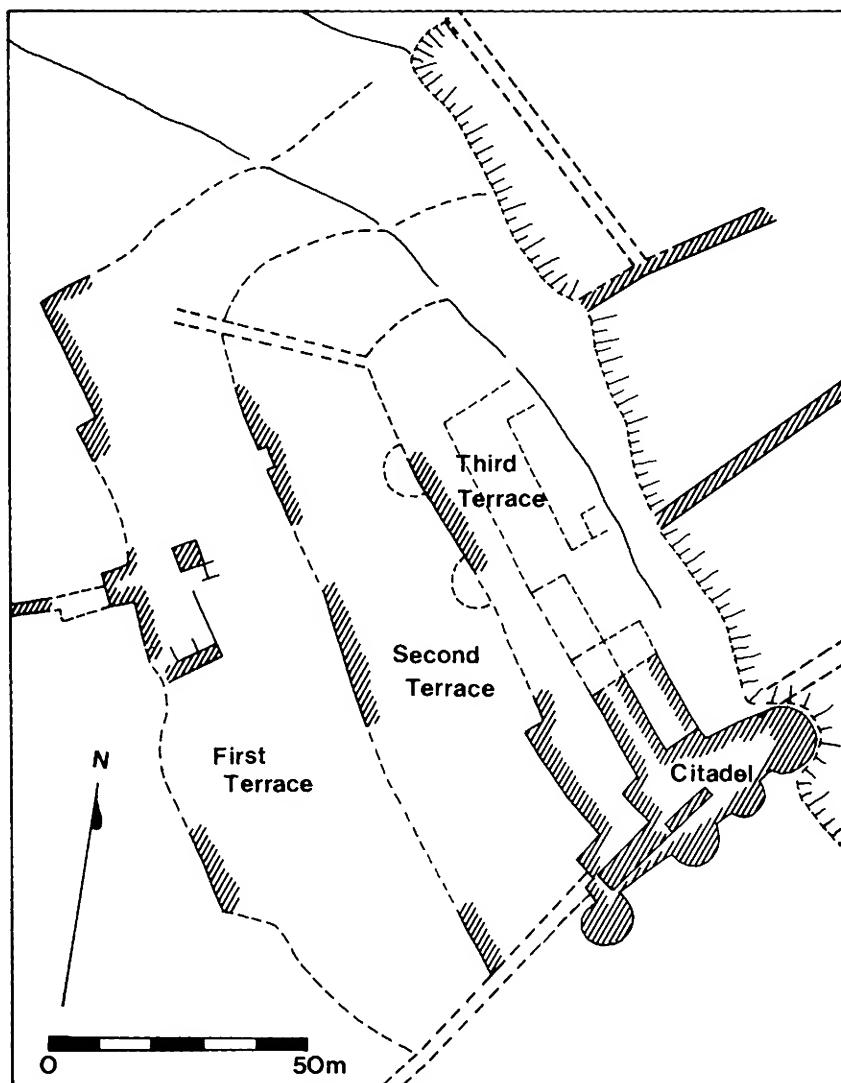


FIG. 36. Plan of the citadel at Bishapur. After Ghirshman 1971, plan I

Sasanian reliefs cut into the rock face behind the terrace suggest an early Sasanian foundation. Ceramics from the excavations and from Kleiss's surface collections show strong parallels with the materials from Qasr-i Abu Nasr. It is particularly unfortunate that the dating and character of the remains on the top of the spur are inadequately known.

One further site that may be mentioned in this context is Barm Dilak. This site is noted for a series of small Sasanian reliefs above a spring, located about 7 kilometers southeast of Qasr-i Abu Nasr (Vanden Berghe 1966, 51). Kleiss produced the first map of the area, including the remains of a terrace and Islamic cemetery near the reliefs and, on the mountain

above, fragmentary remains of defensive walls enclosing a hillock about 1,000 meters long. Unfortunately Kleiss found no ceramics associated with these structures (1977, 25-26). The parallel between these remains and those of Naqsh-i Rustam is striking. The reliefs in this case seem to belong to Bahram II (A.D. 275-93; Erdmann 1949; Vanden Berghe 1980, 270 n. 1, on the identifications). In addition to reliefs at Sar Mashad and Naqsh-i Rustam, this king also left a relief at Juyum in the north end of the valley of Shiraz, suggesting a particular interest in this valley. (A citadel called Shahneshin, similar to Qasr-i Abu Nasr, has been reported at Kariyan; this town was known for its im-

portant fire temple; see Groppe and Nadjmabadi 1970, 193–94; Jackson 1921).

The examples of fortresses discussed here point to the crucial role to be played by the identification of the podium. Hauser reported that he turned to this high mound after the discovery of the cribbing on the western slope. "The mass of brick just within this wall disappointed us most deeply. Repeated cuts into it made us only too certain that it was an especially strong part of the platform, the foundation for some important structure taking up about a sixth of the whole area and standing above the general level on a whitewashed podium" (*BMMA* II, 4). He goes on to speculate that the podium may have been the base for a fire altar and may be identified with Baiza

(Bayda). The renowned fire temple of Baiza is usually assumed to be located at the village of Nisa, in the Marvdasht plain, and not among the fire temples in and around Shiraz (Istakhri, 1967, 119). Most of these are not precisely located and therefore might be related to this site. The placement of a major fire temple on a prominent height has been documented, and the association within a town is not unusual. Therefore the hypothesis of a fire temple cannot be ruled out.

The existence of a high solid mass of mud brick is not without parallel. Indeed the excavations at Persepolis had, during these same excavation seasons, left a "central hillock" of mud brick on that terrace. The failure to pursue investigation of this mysterious

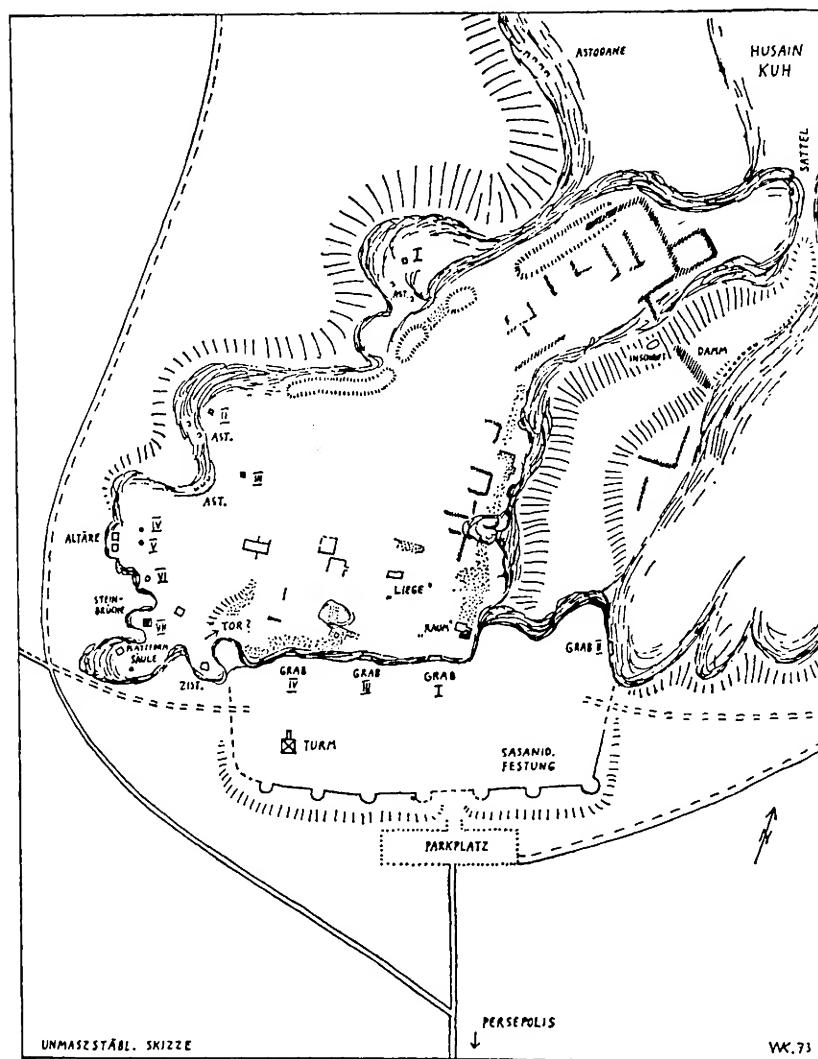


FIG. 37. Plan of Naqshi-i Rustam. After Kleiss 1976, fig. 13

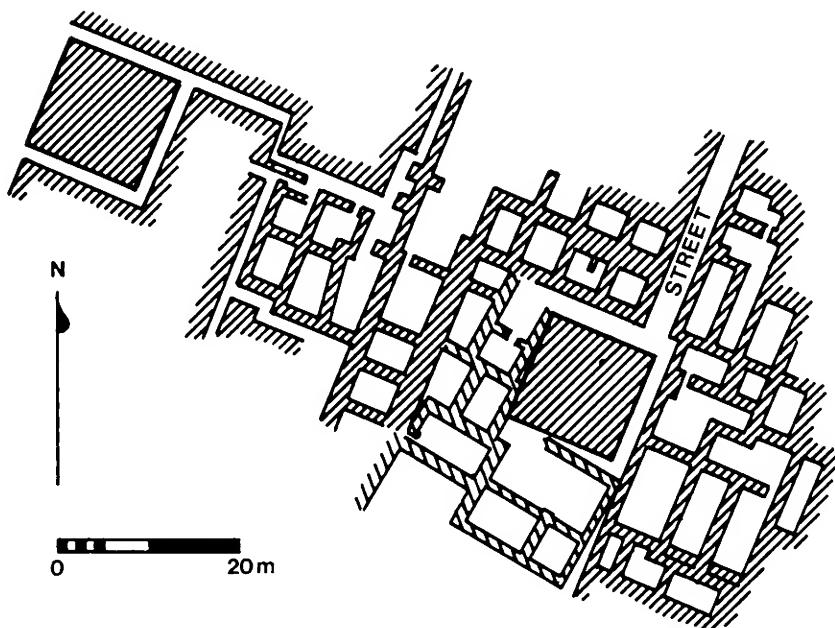


FIG. 38. Plan of the building complexes at Kish. After Watelin 1938, fig. 174

formless area is in itself suspicious but may be purely coincidental; these are not the only examples of unidentified structures. More recently the excavators at Qal'eh Yazdigird have conducted investigations in the vicinity of the Gach Gumbadh, a structure interpreted as a solid mass—a platform for a destroyed building (Keall, Leveque, and Wilson 1980, fig. 1). Such ambiguous masses of solid brick were also found at Kish in Iraq; the Kish example is interesting not only in that it belongs to the Sasanian period, as presumably Gach Gumbadh does, but in that the "brick platforms" at Kish are within the context of the Sasanian town (Fig. 38). The two platforms have streets leading off a corner, and Platform C is surprisingly similar to the podium in the arrangement of buildings around it, especially when cardinal orientations are aligned. Based on the coins and other artifacts, Moorey dates this complex (SP-7) to the early fifth through mid-sixth century. Two distinct architectural phases are indicated by the differing building orientations. These buildings differ sharply from the other Sasanian excavations at Kish (generally styled as "villas"), and Moorey sees the platforms, within this urban context, as perhaps the remains of warehouses or, with parallels from Choche and Ctesiphon, part of an administrative complex (1978, 141–43).

This assessment accords with the present analysis of the podium of Qasr-i Abu Nasr. The podium is the highest, most prominent feature of the fortress; it was moreover the focus for the entire town of Qasr-i Abu Nasr, between the second defense and the fortress, rising above the fortress gate. The few fortresses available for comparison seem to have had palaces in prominence. Prominent urban fire temples are not well attested. Further, fire temples seem always to have been built on rock foundations with stone superstructures, hardly likely to vanish without a trace. Consequently the characterization of this structure as administrative is perhaps the most accurate, if not the most precise.

The problem of the identification of the podium should also be considered in the context of the town plan of the fortress. The development of the settlement during the first architectural phase seems largely to have been one of accretion, governed by available space. The cadastration, and thus the functional arrangement of the building complexes, is ambiguous. It seems clear, however, that the reorientation initiated in the second architectural phase does not imply a reorganization of the functional arrangement of the town. Nevertheless it seems that the town plan in its fullest extent (during Phase 2a) may reflect the intended organizational pattern as it de-

veloped over the course of the history of the settlement.

The consideration of town planning is an extremely difficult task. Most of the comprehensive archaeological plans are the results of excavations from the 1930s, when there were interest and economic feasibility but, as one sees at Qasr-i Abu Nasr, not the stratigraphic controls necessary to delineate a historical development. Indeed the inverse relationship between stratigraphic control and extent of exposure continues to plague archaeologists interested in urbanization. The subject is systematically and successfully addressed only in the special conditions of Classical archaeology. Town plans, especially within fortresses, are virtually

nonexistent for comparison with Qasr-i Abu Nasr. One site that has some superficial similarities is Tell Dhahab in Iraq, which is only partially excavated (J. H. Schmidt 1934, fig. 2).

Casting a wider net, one finds an extremely interesting comparison in the excavations of Marisa (Tell Sandahannah) in Palestine. When Bliss and Macalister excavated Marisa in 1900, they uncovered the entire "uppermost city," a fortified hillock (Fig. 39). The city of Marisa seems to have been founded in the third or early second century B.C. and destroyed by the Parthians in 40 B.C. Settlement was continued in the vicinity at Beit Jibrin in the Byzantine period. The planning of Marisa has recently

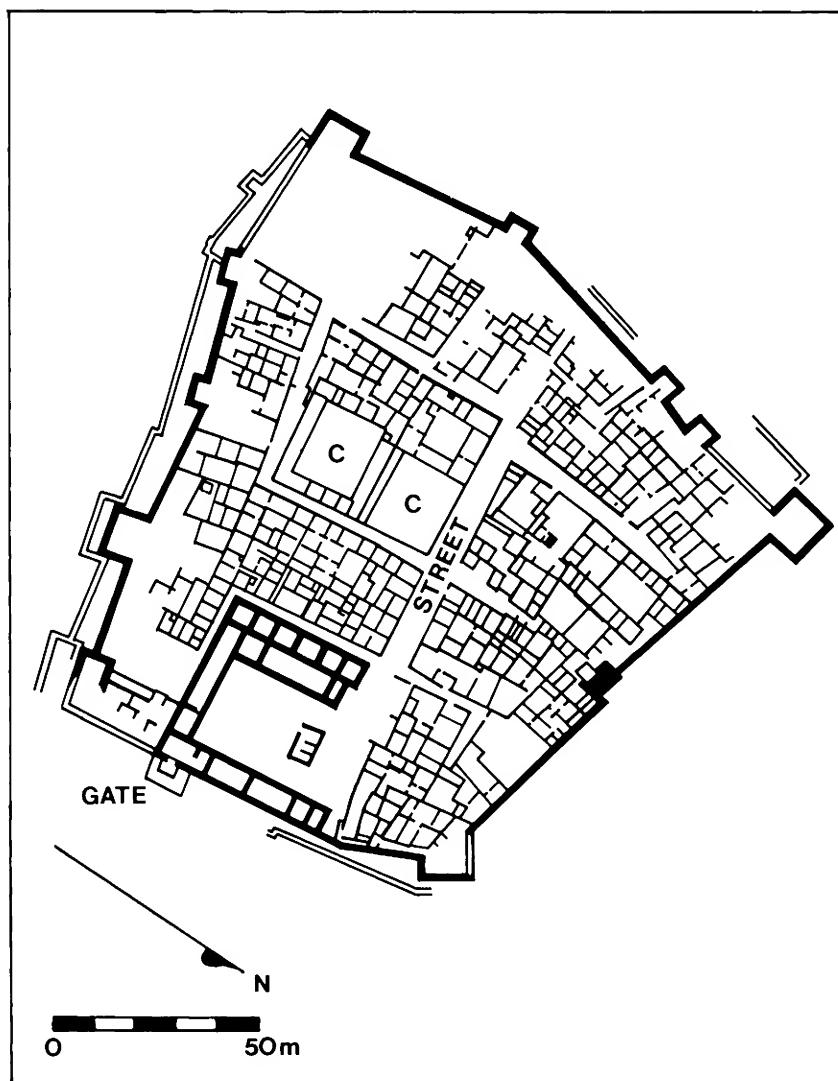


FIG. 39. Town plan of Marisa (Tell Sandahannah). After Bliss and Macalister 1902, pl. 16

been reviewed by Horowitz (1980), who discusses the Hellenistic and Near Eastern elements.

The plan of Marisa holds a number of features in common with Qasr-i Abu Nasr (the accompanying plan is oriented in conformity with Qasr-i Abu Nasr and the compass orientations are not correct for Marisa). Marisa is roughly the same length as Qasr-i Abu Nasr but wider, conforming to the natural shape of the hill. The entrance to the town is in the southwest through a gate and past a massive square building. The main street through the town begins at the northeast corner of this building and continues northward across the town. This street crosses a major east-west street in the northern part of the site. The central blocks, or insulae, of the town are west of the main street and may be divided into three sections, a southern section of buildings, a central section composed of two large courtyards (Fig. 39 C,C), and a northern section of buildings. East of the street the blocks are separated by narrow alleys and tend to be oriented with the wall of the city. The added width of Marisa accommodates sections of buildings along the western wall as well. The comparison of these features, though the features are individually superficial and perhaps coincidental as well, produces plans of remarkable similarity.

The interpretation of the elements is equally problematical at Marisa. The large square building, taking a great percentage of the southern portion of the site, was identified by the excavators as military barracks (Bliss and Macalister 1902, 55). This is tentatively accepted by Horowitz, who adds the functions of an administrative center and a small shrine or temple (1980, 100, 104). In terms of Qasr-i Abu Nasr, these guesses fail to resolve the dilemma of whether to identify the podium as an administrative center or a fire temple. Since the size of these respective areas is roughly equal, the pattern of rooms around a court at Marisa suggests a possible reconstruction for the superstructures on the podium at Qasr-i Abu Nasr.

The central blocks of the town at Marisa seem to duplicate the rectangular area of Phase 2a in relative location and division into three sections, with the central section as an open area. Horowitz suggests that the pair of courts at Marisa functioned as markets and inns and were thus the agora of the town.

While this Hellenistic explanation cannot necessarily be applied to an Iranian town, one may note that, when the open area north of the podium was filled with buildings during Phase 2a, an open area seems to have occupied the central section of the rectangle (filled later by the Central House). Although the spatial organization appears to be analogous, there is no *a priori* reason for considering the functional characteristics to be identical.

In spite of these similarities, the two towns are separated both geographically and chronologically. Marisa appears to be antecedent (assuming there is no Byzantine development of the town), and the possible overlap between Marisa and the post-Achaemenid (late Parthian) at Qasr-i Abu Nasr (Phase 1a) seems to predate the rectangular area of Phase 2a but perhaps not of the construction of the podium (Phase 1b). The vague notion of a continuity of town-planning tradition lingers. This is somewhat strengthened by the fact that Marisa was destroyed by the Parthians. It would be a happier situation (for this discussion, if not for Marisa's inhabitants) if the town had been destroyed by the Sasanians, who often transported whole populations as spoils of victory. If Qasr-i Abu Nasr had been named "the-better-Marisa," on the analogy of Antioch and Jundishapur, the connection between the two towns would have been established and the speculations on these similarities would rest on firmer ground; still, the discussion is not completely facetious, since distinctively Palestinian ceramic forms were found at Qasr-i Abu Nasr.

Just as Marisa should be considered a Palestinian town, however strong its Hellenistic elements, the fortress at Qasr-i Abu Nasr must be considered foremost an Iranian, and more precisely a Sasanian, town. It is very likely that this fortress was absolutely typical of the fortresses and towns that made up the highly urbanized province of Fars during the Sasanian period. The absence of parallels is therefore ironic but not entirely unexpected, given the limitations and history of archaeology in this area. The complete excavation of another Sasanian fortress or town is not a foreseeable event. Nevertheless the composite information from this site, imperfectly understood as it is, may form a contextual model to be tested with elements from other sites.

Ceramic Evidence

In the absence of reliable stratigraphic or locational information, the presentation of the ceramics is organized stylistically. The resulting typology is far less rigorous than might be desirable, being based almost entirely on overall form, that is, the general vessel shape. In some cases the objects fall into tight logical groupings, while at other times the vessel groups seem subject to endless permutations. The typological presentation is therefore only a descriptive convenience rather than a reflection of normative artistic modes. As will be shown, ceramic parallels indicate a chronological range of as much as 700 years (A.D. 100–800); this was not, one must hasten to add, a continuous occupation, but was divisible into discrete periods; these are periods for which archaeological data such as this corpus is either lacking or subject to lamentable imprecision. Periodization is suggested in the descriptions of the ceramics but should be taken as little more than guesswork.

Ceramics from the fortress were all drawn by the author at full scale from the actual objects in The Metropolitan Museum of Art (indicated by the accession number: e.g., 34.107.59). Artifacts not brought to the United States were drawn by Wilkinson at the site; these scale drawings, enlarged to full size, are included in the following figures. Descriptions of the ware and surface treatment are limited to information on the field drawings, when the object is not in the museum. Information on the find spot is copied exactly from the field records in hope that possible location of lost records might clarify the too-often ambiguous locations described.

An important feature of life in this fortress was naturally the storage of goods—most likely foodstuffs—in pithoi (locally known as *homreh*). These containers generally measured 50 to 60 centimeters in height and 40 to 60 centimeters in maximum diameter. Decoration is generally confined to the shoulder and neck, since such vessels are commonly found buried in the floor of storerooms. Handles are rare and, when they occur, are small, presumably more for attaching covers than for lifting. The following types of large storage jars occur:

A) Greenish cream ware with comb decoration. The neck is straight and high; the rim thickened and simple (Fig. 40 a–g). These were found mainly on the north side (Phase 1c–2a). A good parallel was found at Qal'eh Dukhtar (1978, 29) and others at Istakhr, with vague similarities to jars from al-Hira (1934, 20.2) and Tell Dhahab (E. J. and M. J. Keall 1981, 23.11).

B) Dark gray or buff wares often with incised decoration on the shoulder. Rims are thick and triangular or square in section (Figs. 40h–i; 41a–e). (Smaller variants of this type also occur in the same areas; Fig. 42e–g). These occurred in the Central House (the room with piers) and on the north side (Phase 2a, 2b). Vessels of this type, or more precisely with such rims, are often found in Iran (E. J. and M. J. Keall 1981, 11), at Istakhr, Naqsh-i Rustam (1970, 29.10; 1976, 20.13, 20), Qal'eh Dukhtar (1978, 24), and Susa (1977, 33.10–17), where they appear to be early Islamic.

C) Buff or black ware with barbotine decoration, appliquéd forms, chain ridges, and wavy bands, with incised decoration on the neck and an overhanging rim (Fig. 42a, b). The only occurrences seem to have been by Jaafar's round tower and in the western site (Phase 1b, 1c; Fig. 18j). Similar examples of barbotine jars have been found at Istakhr and Bushire (1914, 5.5).

D) Other variants or unusual types which may be mentioned are an amphora (Phase 2b; Fig. 42c, paralleled at Naqsh-i Rustam, 1970, 29.7; Pasargadae, 123.10), a hole-mouth jar (Phase 1b, 1c; Figs. 42d, 56i; with a close parallel at Pasargadae, 175b), a high-neck variant of Type B (Phase 2a, 2b; Fig. 42j; a similar rim occurs at Qal'eh Dukhtar 1978, 25, 26), and a thin gray ribbed ware (Phase 1c, 2a; Fig. 42k; Istakhr and possibly related to brittle ware from the Siraf citadel).

A series of smaller jars that may conform to the same general form as the large storage jars presumably performed much the same function on a limited scale and with greater mobility. The presence of burnishing, which inhibits evaporation, suggests that liquids may have been stored in these vessels. Although they bear decoration on the shoulder and neck, their wide, flat bases were well adapted for set-

FIG. 40 Large storage jars

	Description	Location	Photograph no.	Accession no.
a	comb decoration, 3 handles	Museih, Room N side	F43, F105.6	
b	coarse greenish ware, probably 3 handles	Abbas Isa, N slope top	F36, F107	
c	pink ware, buff slip, comb decoration	Abbas Isa, N side	F36, F101, 101A	34.107.2
d	pink ware, buff slip, coarse comb decoration	Abbas Isa, N slope top	F36, F102	
e	coarse greenish ware, comb decoration		F49, F108	
f	gritty green ware, comb decoration, 3 handles	N5	A282, A285	
g	coarse light red ware, buff slip on interior and exterior			
h	dark gray polished ware, incised	Room with piers, near E pier	F29, 32, 33, 109-11A	
i	buff ware, incised	B	F51, F114	

FIG. 40 Large storage jars

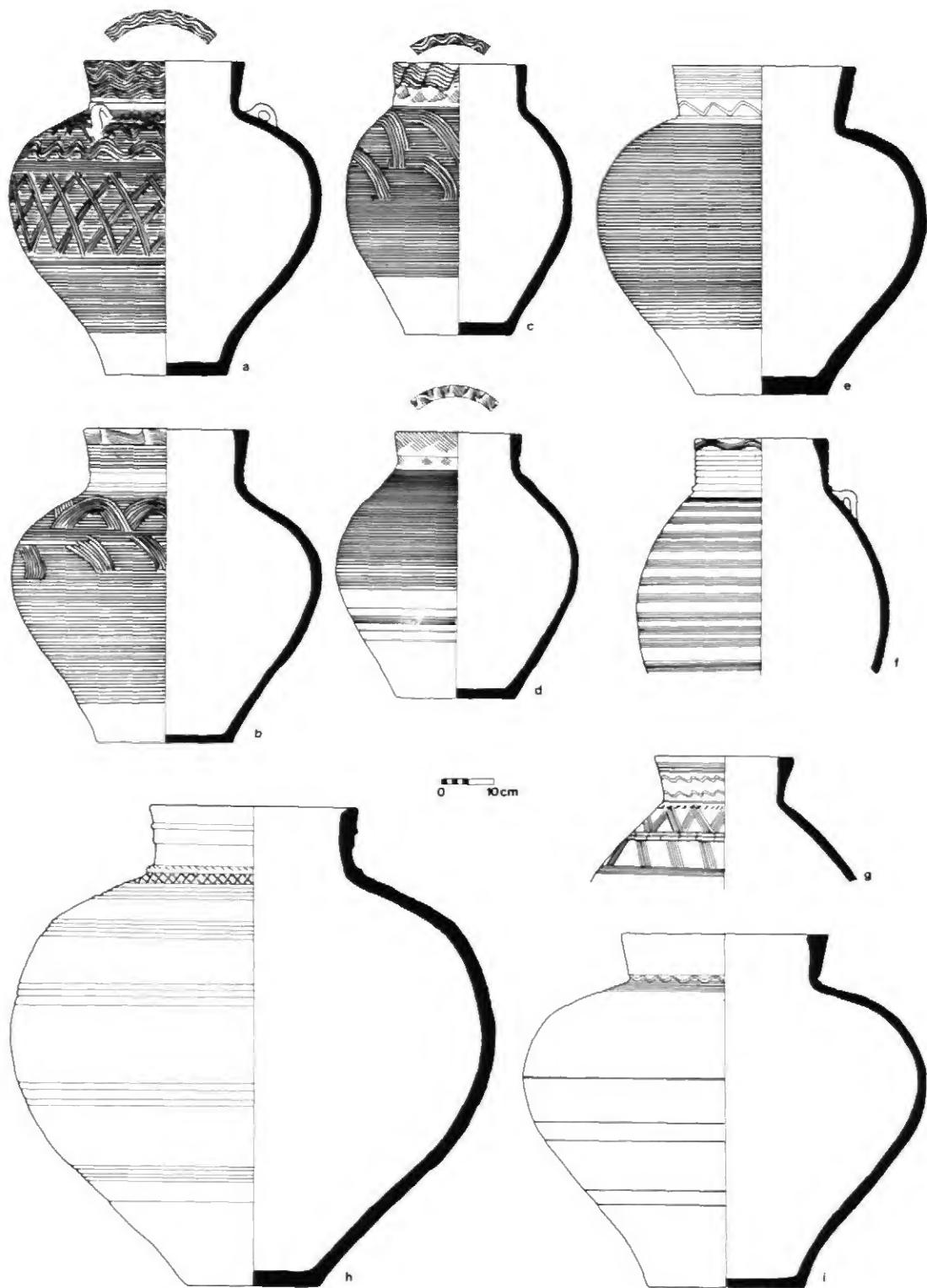


FIG. 41 Large storage jars

	Description	Location	Photograph no.
a	3 handles, incised	Museih, E side, room with candlesticks	F65, F100
b	coarse greenish ware	Safar, room N side top	F60, F99
c	pink ware, polished brown	Abbas Isa, 2d group of jars, N side	F72, F109, 110, 113, 113A
d	dark gray ware, incised	Room with piers, near W pier	F29, 32, 33, F109, 110, 112, 112A
e	dark gray ware, incised, limestone cover	Ibrahim, room N side top	F40, F90

FIG. 41 Large storage jars

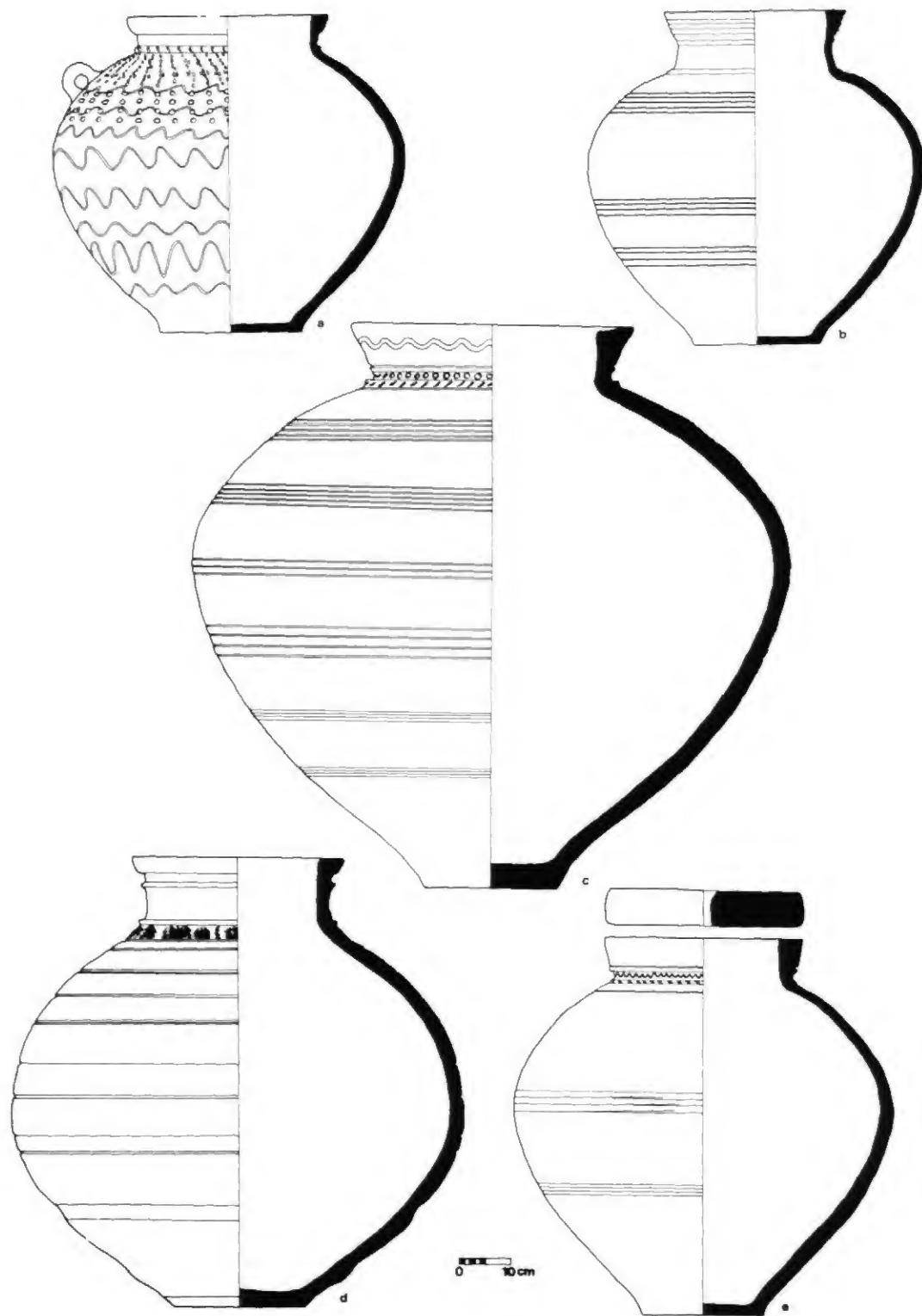
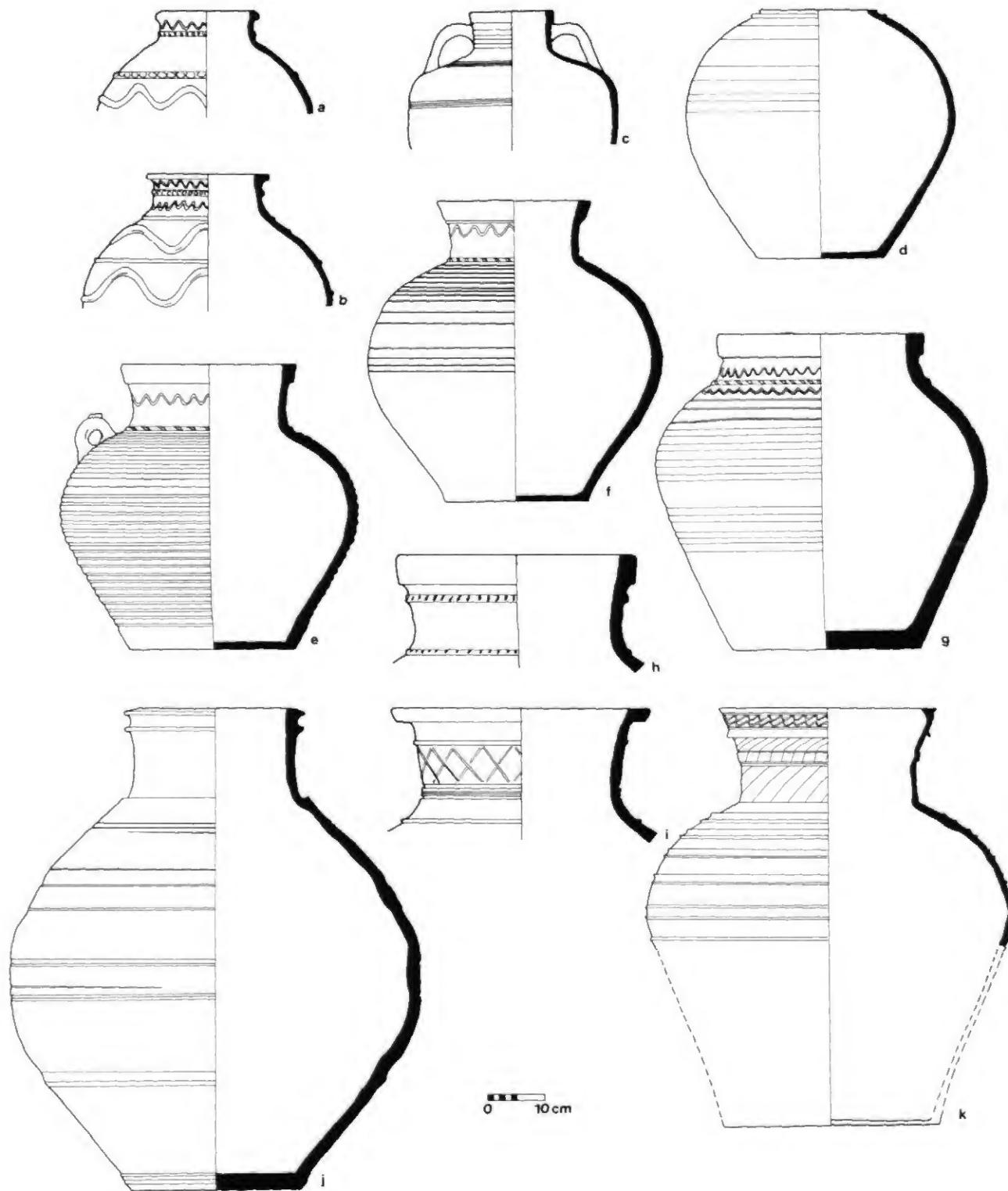


FIG. 42 Large storage jars

	Description	Location	Photograph no.	Accession no.
a	buff ware, dark red slip on interior and exterior	Jaafar, by round tower	F326	
b	black gritty ware	Jaafar, by round tower	F327	
c	smooth buff ware	Haidar, N side top	F314.1	
d	buff ware	Abbas Isa (A13)	F103	34.107.58
e	coarse gray ware, 3 handles with circular boss on top, ribbed	Abbas Isa, 2d group of jars	F74, F92	
f	gray ware, incised	Mirza Husein, B	F52, F96	
g	coarse gray ware, incised	Room with piers	F32,33,91	
h	coarse buff ware	Ali Askar		
i	coarse buff ware, incised	Ali Askar		
j	buff ware	Abbas Isa, by brick walls	F54,89	
k	coarse gray ware, ribbed	Ziyad, top of NE side	F116	34.107.56

FIG. 42 Large storage jars



ting on floors or other surfaces. These jars may be divided into two general types:

A) Usually a buff ware, often with a black or red burnished slip. This is the larger of the two types, averaging 45 centimeters in height, with a maximum width of 40 centimeters. Handles are occasionally present. Decoration is incised lines, generally in wavy bands or vertical strokes (Phase 2a, 2b; Fig. 43a-l). Good parallels for this type occur at Pasargadae (123.6, 175a) and at Qal'eh Dukhtar (1978, 30). Particular attributes are shown by E. J. and M. J. Keall from a variety of Iranian and Mesopotamian sites (1981, 15.27, 12.32, 15.2, 14.4, 14.2).

B) Similar buff ware with burnished slips. Handles seem very rare on this smaller type of jar, which generally measures 25 centimeters in height and 20 centimeters in maximum width. Decoration is not common but seems to imitate the larger jars (Phase 2a, 2b; Fig. 44a-h). As with the previous types good comparisons are found at Qal'eh Dukhtar (1976, 6c; 1978, 31), at Pasargadae (175a), at Persepolis (1957, 72.15) and at Istakhr.

With the jugs, one sees a vessel type clearly intended for liquids and short-term storage. The ware is generally a greenish-cream or buff and never burnished. Decoration is infrequent and confined to incised lines or combed bands (Phase 1c, 2a; Fig. 45c, f-h). The type occurs widely on the fortress as well as in the town below (see below, Figs. 77 l, 78v). Parallels with this type of ware (Naqsh-i Rustam 1970, 29.4) are less common in the literature than with the two preceding types.

Smaller versions of these jugs are found (Fig. 45e) and may be grouped with juglets and pitchers. Like the jugs these vessels are usually a buff or cream ware. Necks are usually narrow and decoration confined to incised bands or punctate designs (Phase 1c, 2a; Fig. 46a-h). Similar forms occur at Naqsh-i Rustam (1970, 29.6), Persepolis (1957, 72.13) and perhaps Susa (1977, 26.1, 2).

A distinctive group of jars or juglets may be seen in Figure 46i, j, k, and Figure 45d. These vessels are rather squat, having a low maximum width, and tend toward gray or red as well as buff. Their distribution is limited to the western slope of the fortress,

and the northern enclosure wall, Stone Tomb 8 and Cut 3 (Phase 1a, 1b; see below, Fig. 78r). Similar vessels suggesting an early date are from Pasargadae (113.6, 123.8), Susa (1977, 32.6), and Shahr-i Qumis (1974, 5.1a, 3). Two variants are shown in Figure 46, l, m, as examples possibly related to this general type.

Small jars, generally 10 centimeters in height and 10 centimeters in maximum width, bear a resemblance to larger jar forms (Type B) without the tall necks and distinctive rim forms (Fig. 47b-e, g; see below, Fig. 49). Wares are generally buff or pink with a slip occasionally burnished (Phase 2a, 2b). Such pots have been reported from Naqsh-i Rustam (1970, 29.14) and Pasargadae (123.7).

Another category of forms often called jars are crater, distinguished by a relatively wide neck that approaches the maximum diameter of the vessel. These most likely functioned as storage vessels for solid foodstuffs or perhaps for liquids. Two types may be distinguished here:

A) Craters with a tall neck and two handles (Fig. 47h, l). Grouped here on the basis of form, these examples clearly belong to separate traditions. The former is a cream ware with a green glaze and thus generally related to Mesopotamian wares, as found at Dura Europos (Phase 1b, 1c; 1943, 16). The second is a buff ware with a ridged neck and incised shoulder bands, familiar from previously discussed forms (Phase 2a, 2b); its form is known from Pasargadae (124.9) and Naqsh-i Rustam (1970, 29.7), both Islamic contexts.

B) Craters with a wide, short neck, larger than Type A (30 x 35 centimeters). Decoration is confined to incised lines on the shoulder. This form may be a smaller version of the storage jars (such as Fig. 42g; Phase 2a, 2b; Fig. 47, o, p, q; see below, Fig. 51hh). This form does not seem to have been specifically reported, except by E. J. and M. J. Keall (1981, 11.10).

Cooking pots are defined as globular vessels with a wide neck and rounded base (Fig. 47a, f, i, j, k, m, n). Decoration is limited to scored lines or punctates at the shoulder. The ware is usually buff or black, the blackening being possibly due to repeated exposure to fires; otherwise the identification with food

preparation as opposed to storage is uncertain. One small example is noteworthy in that it is blackened and has a handle (Fig. 47k). Find locations are mainly on the north, with some in the center (Phase 1a, 1b for Fig. 47f; Phase 2a, 2b for Fig. 47i). Similar pots are found at Susa (1954, 27.1275; 1977, 32.4,5), Pasargadae (117.22, 123.15), and Qal'eh Dukhtar (1976, 6a).

A wide range of small jars and bottles was found on the fortress. The small jars previously discussed (Fig. 47c, d, e) fit into a broad category of such jars (Fig. 48). Distinguishing characteristics are simple outcurving rims, small lug handles; along with buff and pink variants, a gray or red ware with polished slip predominates. Decoration, other than the burnished slip, is incising (Fig. 48m) or painting (Fig. 48g, h). Almost all of these vessels were found in deep tests or on the west slope in the fill of the cribbing or nearby. This category may be typified as follows:

A) Bottles with small neck and two small lug handles (Fig. 48b). Such handles are often taken as a diagnostic of the late Achaemenid to Parthian (Seleucid in Mesopotamia) periods. Somewhat similar handles continue into Sasanian times (Phase 1a, 1b). A few examples may be cited from Pasargadae (116.2,4,7, 115.7), Naqsh-i Rustam (1970, 29.8), and Persepolis (1957, 72.6,7). Farther afield, there are those from Qumis (1974, 4.2) and Hasanlu (3.2,9), as well as numerous sites in southern Mesopotamia (and northern, e.g., Nimrud, 18.94).

B) Jars with wide mouths (Fig. 48p,r), ranging from 10 x 10 to 15 x 20 centimeters. The striking polished red decoration and lug handles are again present (Phase 1a, 1b). The same sites as those mentioned for Type A also have wares comparable to this type; Pasargadae (116.29, 117.2), Naqsh-i Rustam (1976, 20.12), Persepolis (1957, 72.8), and Hasanlu (54.9).

These jars are associated with a series of jars with painted decoration (Fig. 49a-t), which share the lug handles and finely burnished surfaces. The ware tends toward a buff with a red or, rarely, brown or black paint. Rims are quite different, broad or overhanging (Fig. 49a, b, f), or straight or slightly incurving (Fig. 49d), rather than sharply outcurving.

The painting occurs on the shoulder or neck, and the repertoire of motifs includes hanging fringes, triangles (generally hanging), ladders (Fig. 49f, o) and hanging curls. The most common find spot was on the west or south slope of the fortress; one example was found in the western site (see Fig. 21s) and one in Cut 3 (see below, Fig. 78h; also Figs. 55, 57).

Most of these painted wares may be said to belong to a pre-Sasanian tradition. In particular the jars with hanging triangles recall the painted ceramics called "triangle ware" from northwestern Iran (Young 1965). The style conforms more closely with the "festoon ware" described by D. Stronach (1974), which frequently features crudely drawn birds (see below, Fig. 55m), horizontal bands, dot patterns (Fig. 49k), and crosshatched triangles (Fig. 49t; D. Stronach 1974, 42, 43). There is a conspicuous absence of the festoon itself (except possibly in the case of Fig. 55f). Vessel forms also appear to be much different; the only good parallels are the small jars with hanging triangles. Parallels from Pasargadae consistently point to a post-Achaemenid deposition. This evidence suggests that the style may be a development out of the late festoon-ware tradition, suggested by D. Stronach to have lasted at least to the first century B.C. (1974, 246).

The materials at Qasr-i Abu Nasr (Phase 1a, 1b) have specific parallels from Pasargadae (122.8,24, 116.1), Persepolis (unpub., PUA 106), Istakhr (deep soundings), Yahya (1972, 1j), and Malyan (Balcer 1978, 7).

A series of large bowls found in most of the excavations on the fortress was usually a buff ware, often with a red slip and comb incising (Fig. 50b, c, e-n, p). Measurements range from 10 to 20 centimeters in height and from 30 to 40 centimeters maximum diameter. Bases are usually flat, with shaved lower walls; rarely a high ring foot occurs. Rims are simple and often incurving; a raised band often marks this curvature on the exterior (Fig. 50g). Decoration is limited to wavy-comb bands or incised lines and punctates.

This comb decoration bears close resemblance to that of the large storage jars (Type A; Fig. 40a) and smaller jars (Type A; Fig. 43g), which also bear a red slip. As with these other forms, a Phase 1c or 2a may be suggested as an approximate period of use. Somewhat loose resemblances may be seen from

FIG. 43 Jars

	Description	Location	Photograph no.	Accession no.
a	buff ware, burnished red slip	Husein Ali Agha, B	F125	
b	gray ware, burnished black slip	Shahbaz (9a)		
c	pink ware, red slip	Shahbaz (9a)		
d	buff ware, black on neck and shoulders	Haidar, N side	F115.26,116	
e	buff ware	Ziyad, top middle	F312	
f	buff ware, black slip on exterior	Mirza Husein, top center	F117.1	
g	light red ware, dark red slip	Ziyad, bottom of Cut 1		
h	greenish buff ware	N slope top (15a)	F118.2	34.107.34
i	buff ware, dark red slip	Safar (9-10) on plaster floor		
j	pink ware	N end	F45.95	
k		Museih, E side near Husein Ali Agha	F316	36.30.35
l	pink ware, brown-pink slip	Haidar, room N side	F126	

FIG. 43 Jars

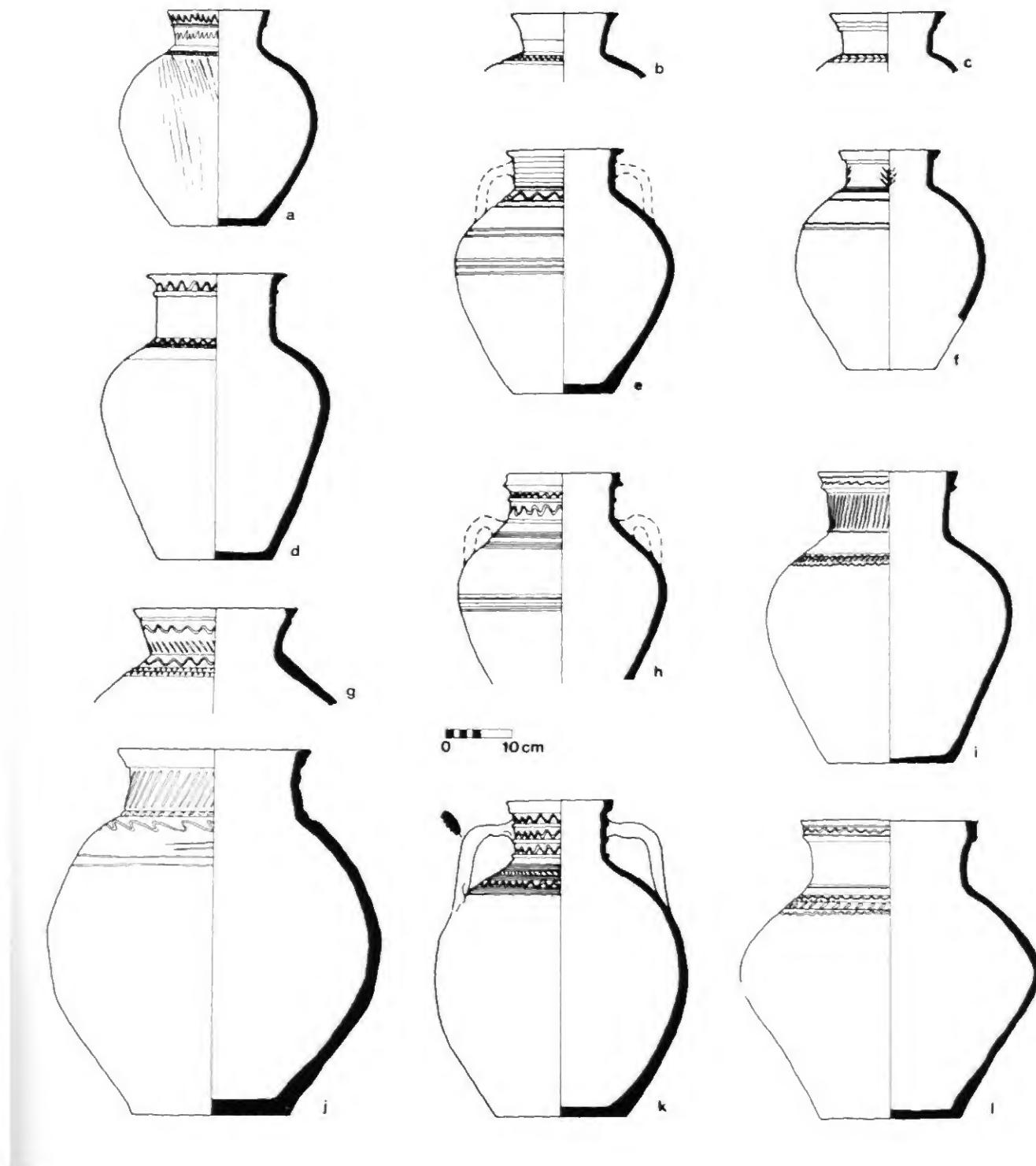


FIG. 44 Jars

	Description	Location	Photograph no.	Accession no.
a	buff ware, self-slip, grit and chaff temper	Abbas Isa, B	F149.2, F73-74	34.107.36
b	orange-buff ware, (red slip?), grit and chaff temper	Abbas Isa, N side (13)	F73-74, F148.2	34.107.32
c	burnished black ware	Akbar, room top E side	F142.2	
d	orange-tan ware, light gray core, light burnish on exterior, grit and chaff temper			36.30.54
e	buff yellow ware, red slip, grit and chaff temper	Khuda Rahim, room N side	F154.1	34.107.24
f	orange-tan ware, burnished red slip, fine grit temper	Abbas Isa, N slope (13)	F154.2	34.107.22
g	buff ware, slip on exterior	Safar, top near Cut 1	F151.2	
h	buff-tan ware, black slip on exterior, incised, grit temper	Mirza Husein, top center	F117.2	34.107.23

FIG. 44 Jars

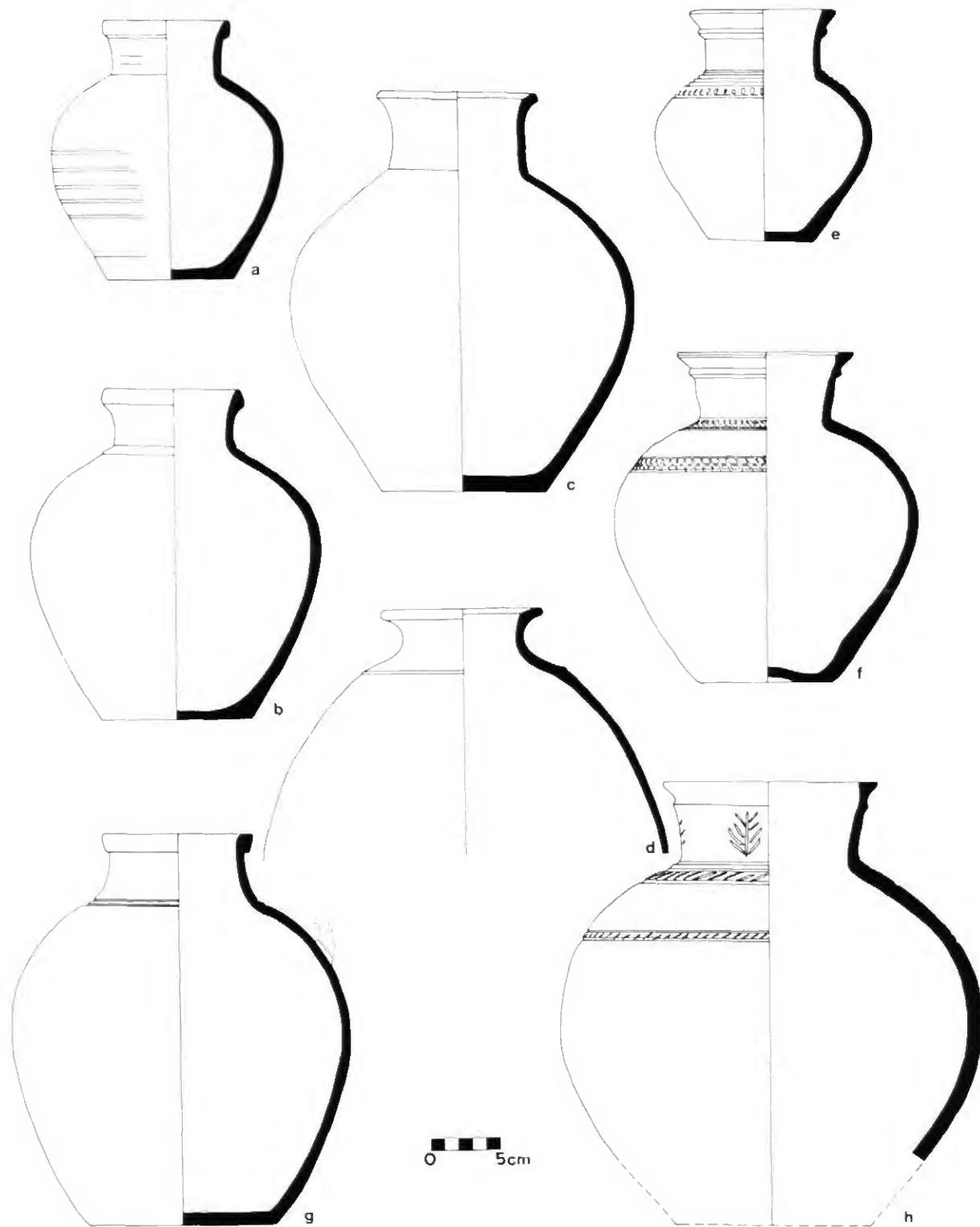


FIG. 45 Jugs

	Description	Location	Photograph no.	Accession no.
a	greenish cream ware, comb decoration	Barfi, E of road deep	F313	
b	greenish cream ware, grit temper	Ali Agha Shawaris, N of fire altar	F68,130.1	34.107.52
c	buff-yellow ware, light brown grit and chaff temper	Ali Agha Riza, W of Central House	F122.1	34.107.25
d	pink-orange-cream ware, large black grit and much chaff temper	Tomb 8 (cf. Fig. 76t)	St. 24.1	36.30.41
e	light brown ware, dark orange- brown slip, grit temper	Abdullah, B near W slope	F159.4	34.107.42
f	greenish buff ware	Museiyib, room N side top	F315.1	
g	smooth buff ware	W side (8)		
h	light gray-cream ware, cream slip (?), grit and chaff temper	Ali Hashimi, N of fire altar	F119.2	34.107.53

FIG. 45 Jugs

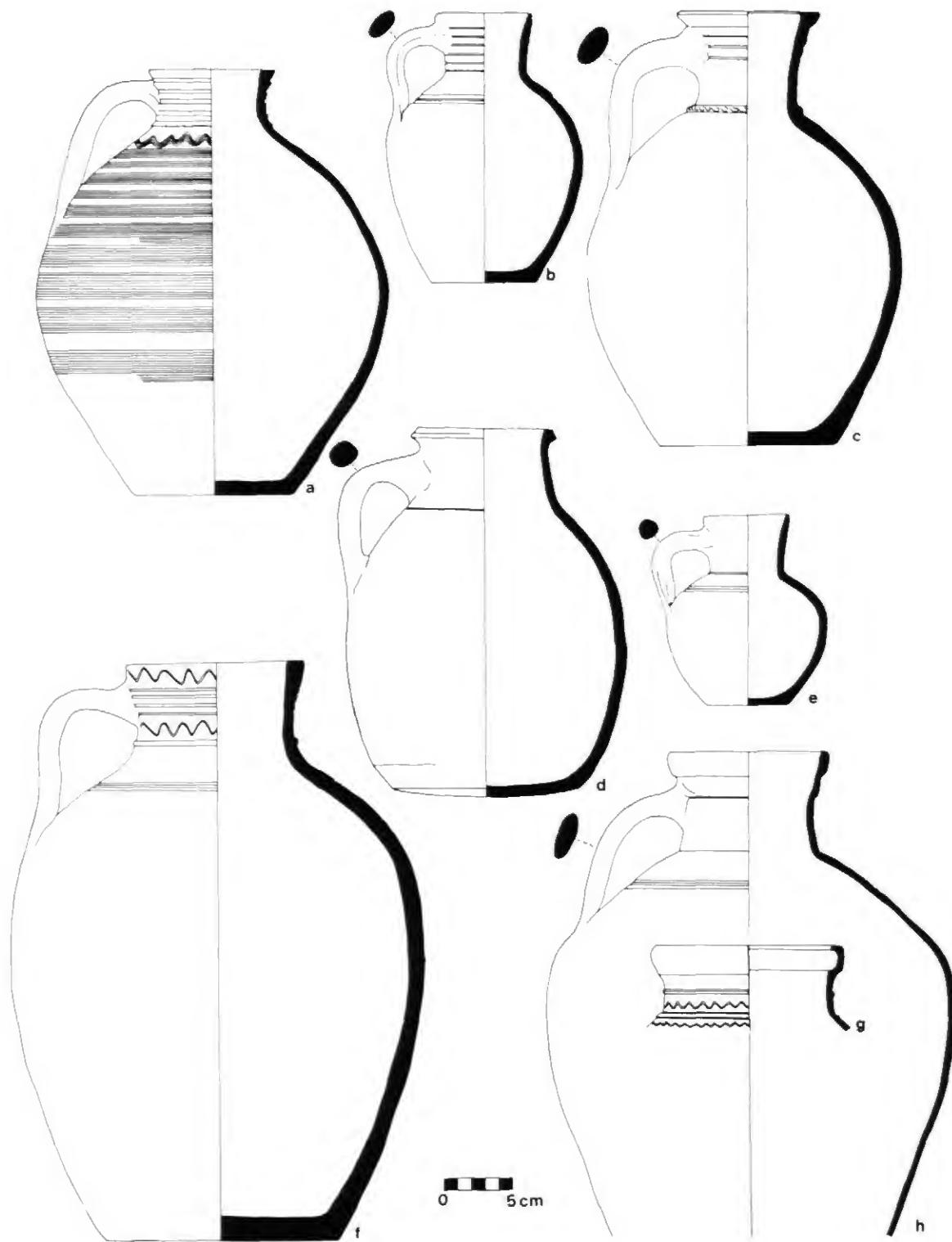


FIG. 46 Juglets and jars

	Description	Location	Photograph no.	Accession no.
a	greenish cream ware, comb decoration	A	F344.6	
b	cream-buff ware, incised, grit temper	Abbas Hashimi, street corner	F152.1	34.107.51
c	cream ware, comb decoration, grit temper	Husein Ali Agha, E side	F497.1	36.30.42
d	red ware	Hajji Husein, N side (10)		
e	buff ware	Akbar, entrance room		
f	gray-yellow ware, red paint	Husein Ali Agha, NW corner	F161.2, F162.2	
g	black ware	Mirza Husein, Room top A	F142.1	
h	cream ware, shaved base, grit and some chaff temper	Ali Agha Riza, W of Central House	F48, F147.1	34.107.26
i	buff ware, smoothed, (lopsided)	Ziyad, enclosure wall, N side	F122.2	
j	very fine smooth red ware, brittle gray core	Ali Agha, W slope; Abbas Hashimi	F153.1	
k	dark buff ware, polished red slip	slope	F344.2	
l	gray ware, pink slip, irregular incised groove	Hajji Riza, N slope, E end (69)		
m			F153.1, F151.2(?)	

FIG. 46 Juglets and jars

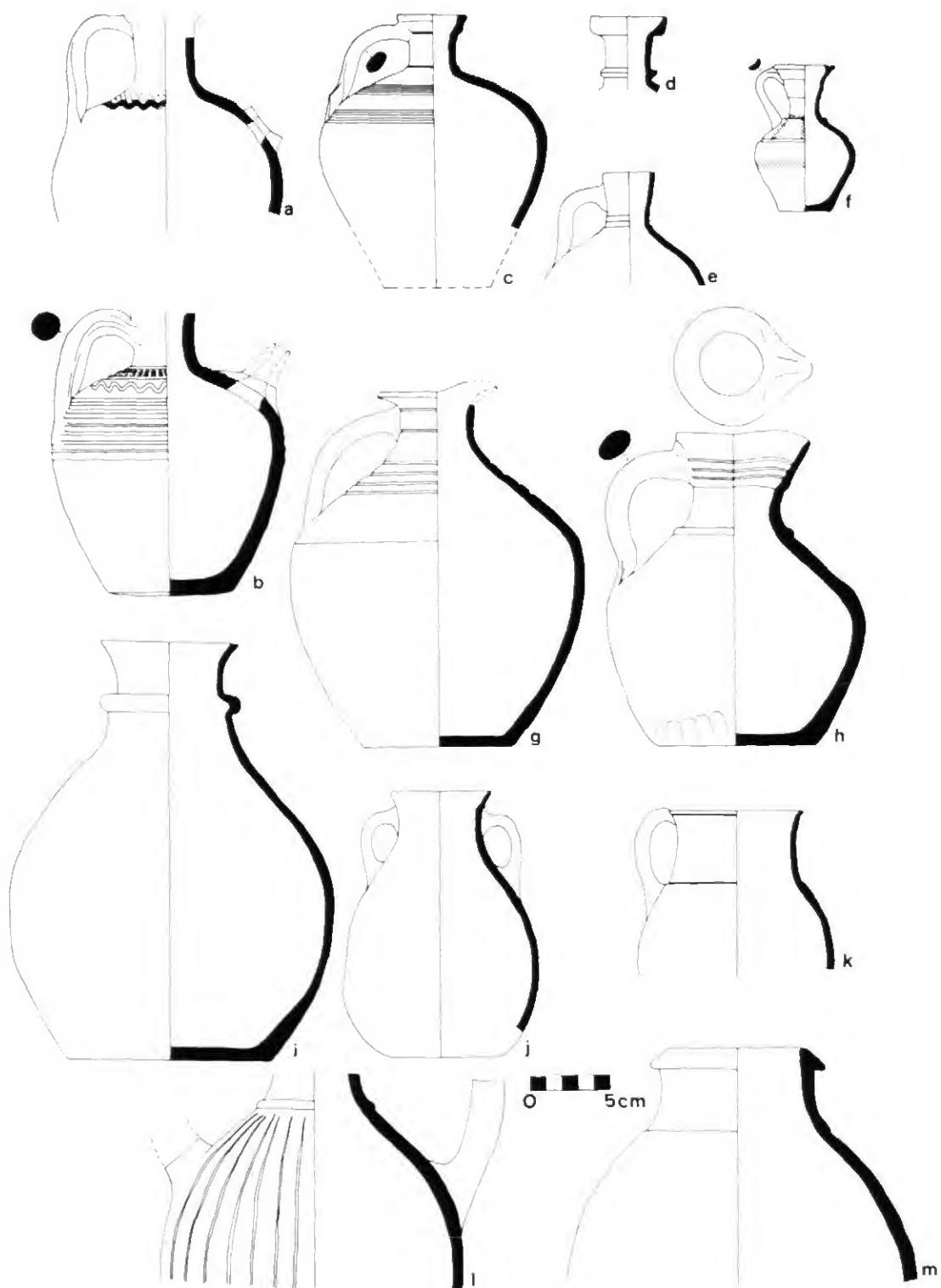


FIG. 47 Cooking pots and craters

	Description	Location	Photograph no.	Accession no.
a	black ware, coarse incising	Ziyad, room NW corner	F138.1	
b	cream ware, shaved base, grit and chaff temper	Ziyad, N enclosure wall (cf. Fig. 77b)	F158.1	34.107.35
c	pink ware, red slip	Ibrahim, below wall, NE corner room, Central House	F159.2	
d	pink ware, greenish slip	top near Cut 1	F160.2	
e	buff ware, light orange, buff, burnished slip, grit temper	Jaafar, W side	F160.3	34.107.41
f	black-tan ware, grit temper	Safar, room center top	F140.1	34.107.28
g	buff ware, red slip	A	F159.3	
h	cream ware, green glaze on exterior, grit temper	Jaafar's corner	F499	36.30.49
i	black ware	Museiyib, N side, with Sasanian coin	F71, 140.2	
j	red ware, buff slip	Ziyad, N corner	F311	
k	black ware, gray interior, heavy grit temper	Kerim, N slope top	F139.2	34.107.27
l	greenish buff ware	Safar, room top N side	F60, 151.1	
m	black ware	Ziyad, top N side	F328, 501	
n	buff ware	B, early		
o	buff ware, greenish cream slip	Abbas Hashimi, N of fire altar	F123.2, F55	
p	buff ware	N slope		
q	buff ware, smoothed	N side		

FIG. 47 Cooking pots and craters

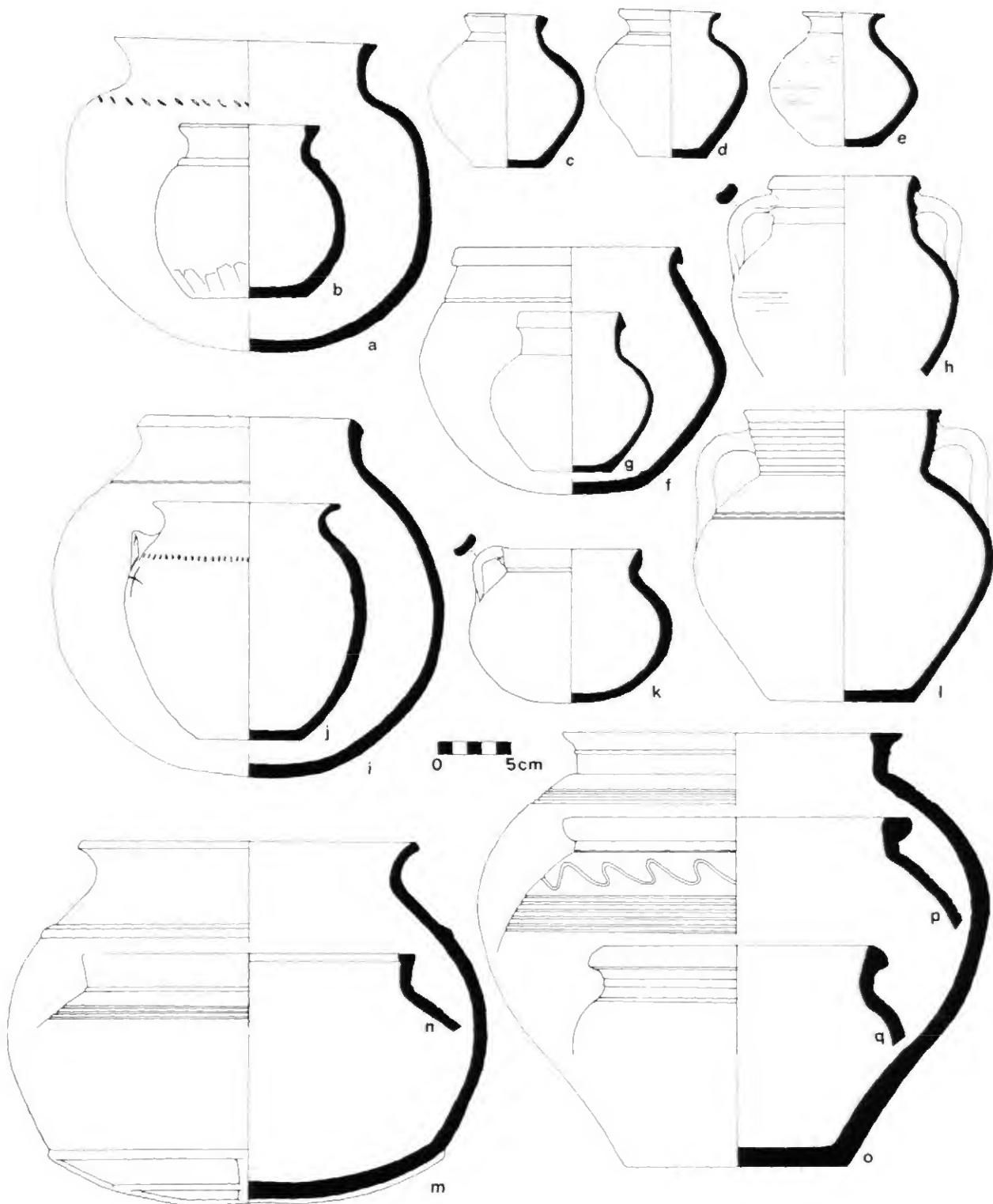


FIG. 48 Small jars

	Description	Location	Photograph no.	Accession no.
a	dark gray ware	Hajji Ali Agha, E side deep (4)	F497.2	
b	fine gray ware	Hajji Askar, NW slope (11)	F156.3	
c	buff ware	Hajji Ali Agha		
d	hard red ware, shaved surface, polished	Ziyad, W slope	F505.1	36.30.39
e	buff ware, crude	Hajji Riza, N slope	F161.4, 162.4	
f	gray ware, black slip	Jaafar		
g	cream ware, red and yellow paint, grit temper	Ali Agha Shawaris	F161.3, F162.3	34.107.48
h	red ware, burnt to dark gray, traces of white paint	Ziyad, room top center	F156.4	
i	gray-brown ware, black slip, grit and heavy chaff temper	Ismail, W slope crib	F157.2	34.107.6
j	red ware, black slip	Hajji Riza, E end of N slope	F344.7	
k	buff ware, greenish buff slip, incised mark	Ziyad, W slope		
l	dark gray ware, burnished, incised lines	Ismail, W slope crib	F157.3	
m	dark red-brown ware, incised	Abbas Hashimi, street corner	F157.1	
n	red ware, polished	Mirza Husein, NE edge (near 74)		
o	pink ware, greenish-buff slip	Ziyad, W slope		
p	fine dark red ware, shaved, blackened surface, fine grit temper	Hajji Askar (9)		36.30.56
q	red ware, shaved, polished	Ziyad, W slope (82)		
r	hard orange-red ware, shaved, polished, grit	Ziyad, W slope (82)	F505.2	36.30.40

FIG. 48 Small jars

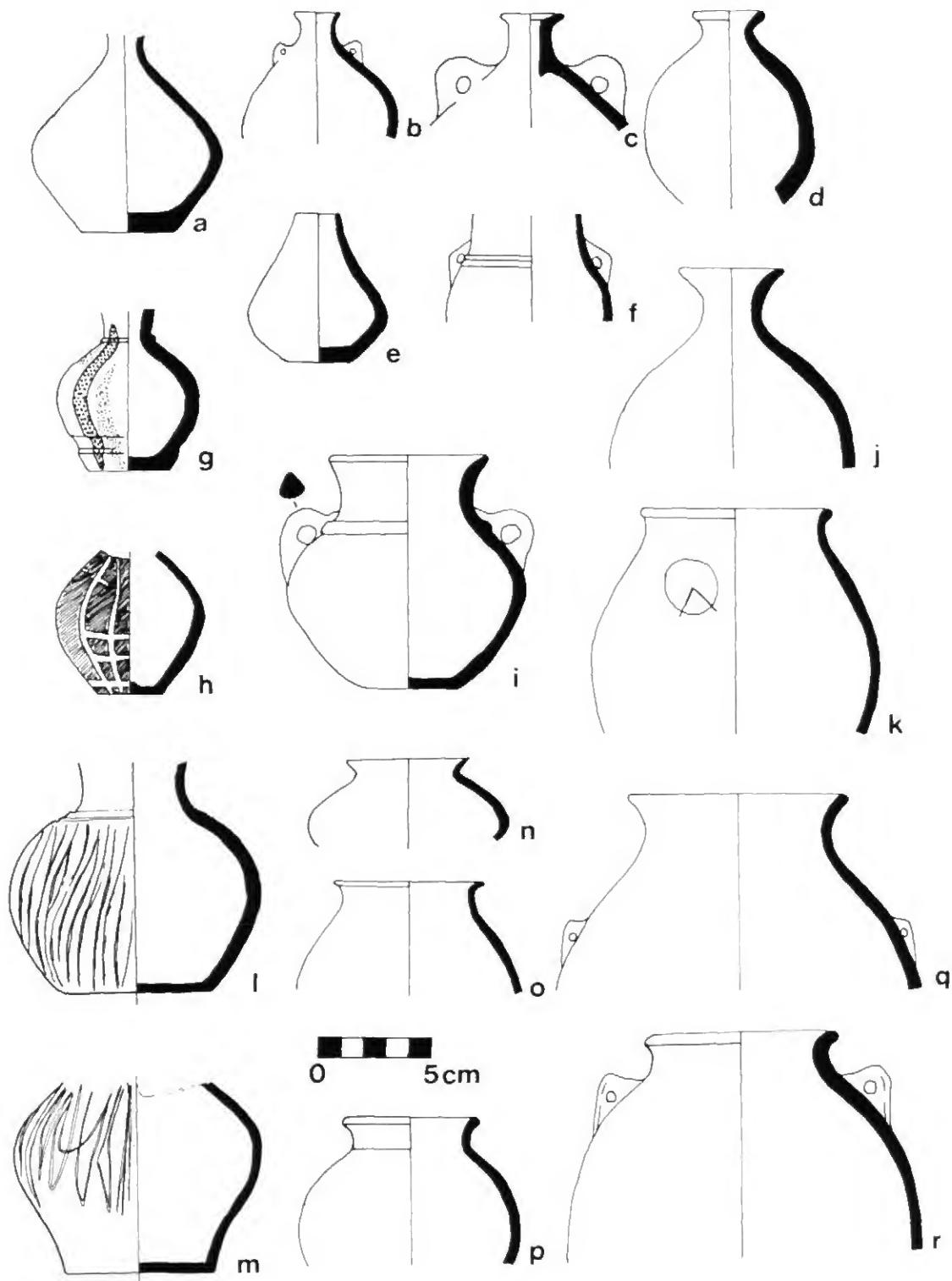


FIG. 49 Painted jars

	Description	Location	Photograph no.
a	fine pink ware, dark red paint	Jaafar	F506.4
b	fine buff ware, brown paint	Ismail, crib 2, W side	F160.1
c	coarse buff ware, black paint	Hajji Askar, NW corner	F506.1
d	pink ware, dark red paint	Jaafar's tower	F504.5
e	pink ware, bright red paint	Jaafar	F506.12
f	coarse buff ware, dark red paint	Ismail, crib 2, W side	
g	smooth buff ware, red paint	W slope	
h	gray ware, buff slip, dark red paint	N side and slope	
i	pink ware, buff slip, red paint and wash	Jaafar	F506.9
j	pink ware, dark red paint	Hajji Ali Agha, W slope	
k	pink ware, white slip, yellow on black paint	Rahim, S slope of platform	
l	pink ware, dark red paint	Jaafar	F506.3
m	fine pink ware, red paint	Ismail (6)	F506.2
n	pink ware, buff slip, dark red paint	Rahim, S slope of platform	F506.8
o	smooth buff ware, dark red paint	Ismail, Jaafar, crib 2, W slope	F506.14
p	brown ware, buff slip, dark red paint	Hajji Riza, E end of N slope	F506.10
q	greenish-white ware, red paint	Ismail, Jaafar, crib 2, W slope	F506.15
r	pink ware, light red slip, dark red paint	Ali Agha, W slope	F506.13
s	buff ware, red paint	Abbas Isa, N slope	
t	red ware, white slip, brown paint	Mirza Husein, NE edge	F502

FIG. 49 Painted jars

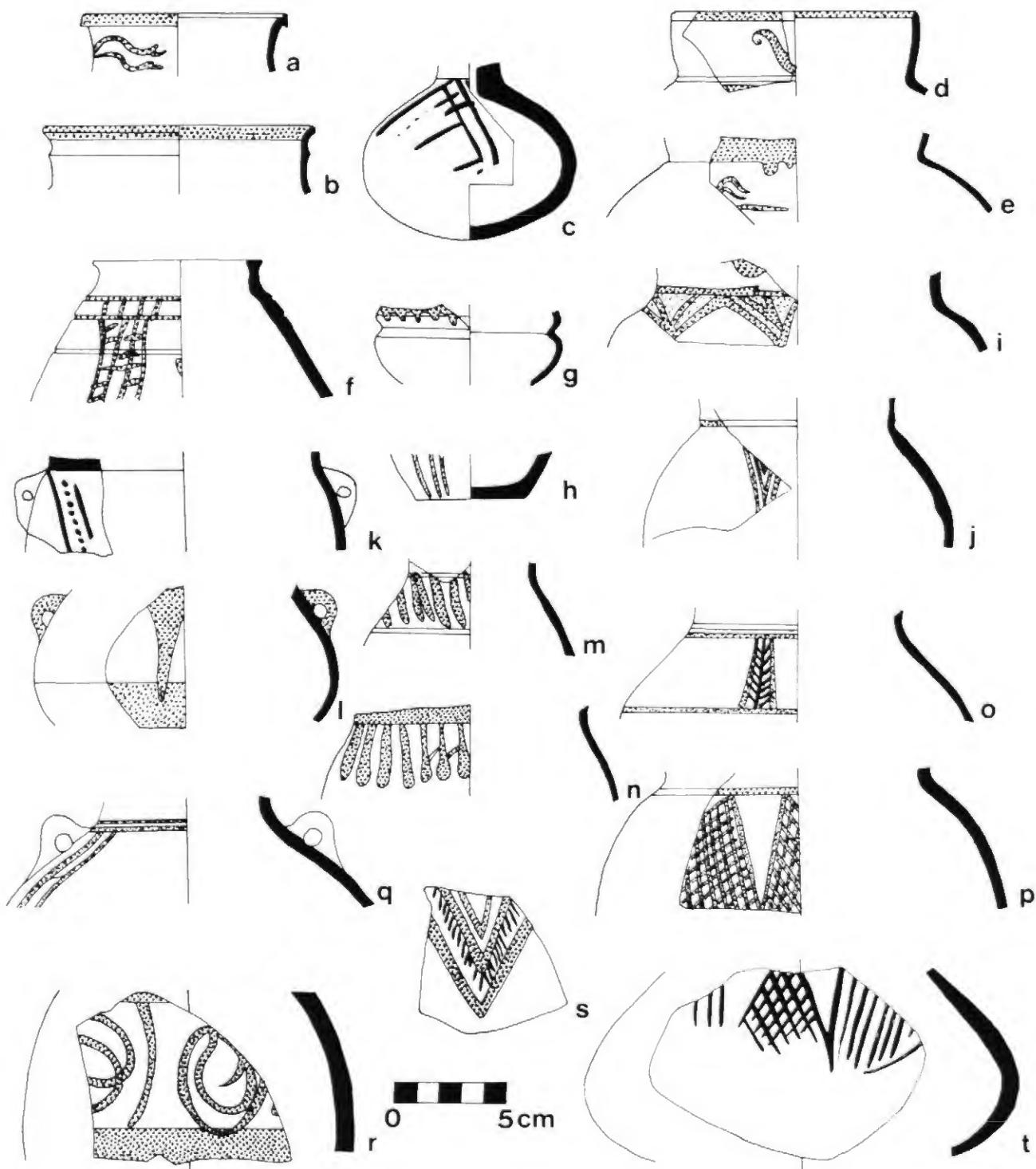
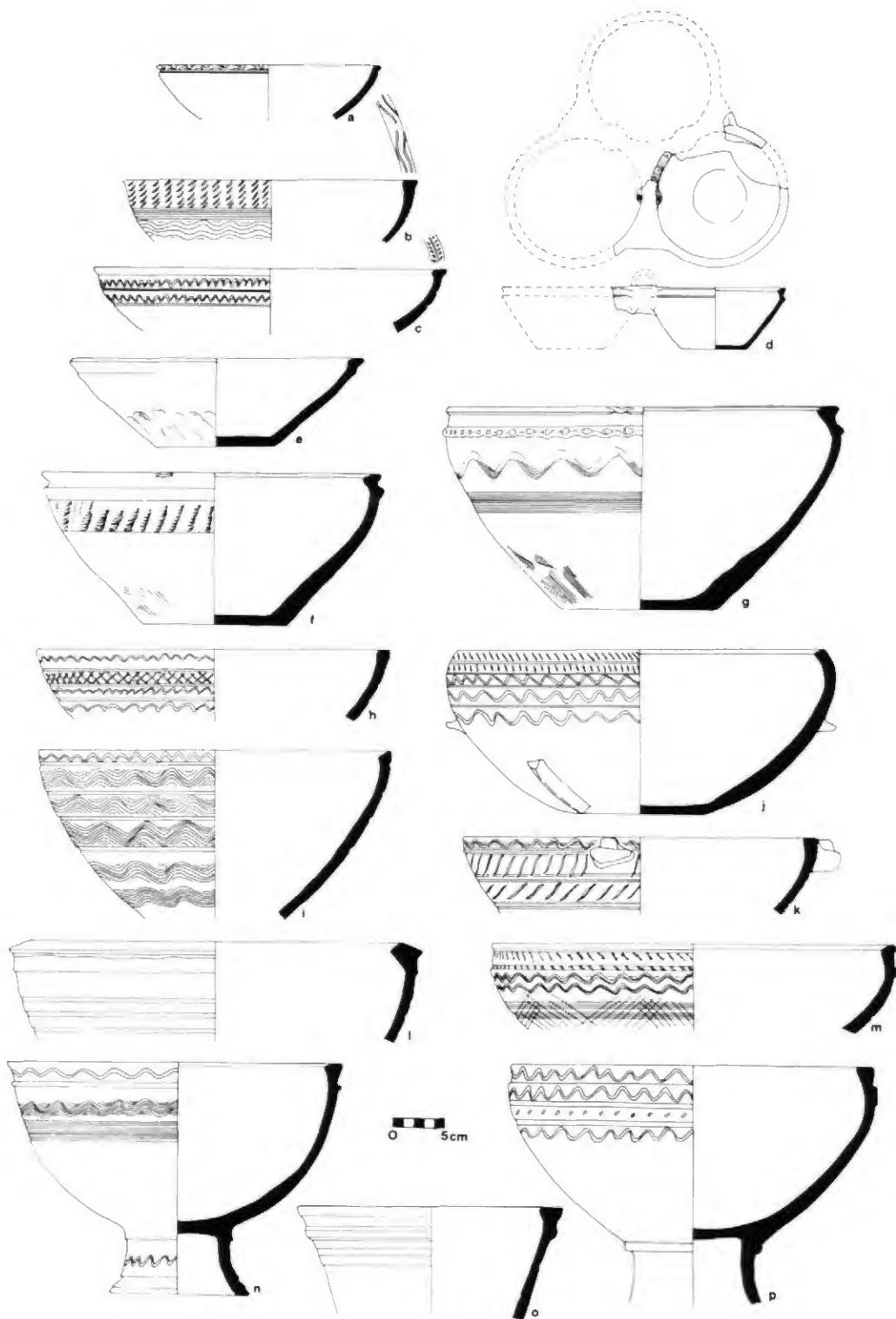


FIG. 50 Deep bowls

	Description	Location	Photograph no.	Accession no.
a	buff ware, hard apple-green glaze, red stripe on top of rim	Jaafar's tower		
b	pink ware, polished, incised	W slope, low	F332.4	
c	buff ware, incised	Hajji Askar, NW corner	F332.5	
d	light orange ware, red slip on interior and exterior, grit and chaff temper	Haidar, N rooms	F322	36.30.44
e	cream-buff ware, shaved base, large black grit temper	Ali Agha, M		
f	pink ware, shaved base, red slip on interior, buff slip on exterior	Haidar, N side	F131	
g	buff ware, red slip on interior and exterior rim, comb decoration, grit and some chaff temper	Museiyib, A	F132	34.107.5
h	buff ware, green-white slip, incised	Husein Ali Agha	F332.1	
i	pink ware, red slip on interior and exterior rim, polished, comb decoration	A	F335.2	
j	buff ware, dark red slip on interior and exterior rim, incised, 2 horizontal lugs, 3 vertical lugs	Arab, N of fire altar, near Akbar	F135	
k	buff ware, red slip on interior and exterior rim, incised	Kerim, hump	F332.2	
l	yellow ware, blue-green glaze on interior and exterior rim	N side		
m	buff ware, dark gray-brown slip on interior and exterior rim, comb decoration	Hajji Ali Agha	F334.1	
n	pink ware, red slip, comb decoration	B on top	F134	
o	light red ware	Kerim, N slope		
p	pink ware, red slip on interior and exterior rim, incised	Khuda Rahim	F133	

FIG. 50 Deep bowls



Seleucia (Debevoise 1934, 19) and Susa (1977, 33.10). The two examples with green or blue-green glazes fit comfortably in this Mesopotamian tradition (Fig. 50a, l). Closer parallels in rim forms may be seen from Istakhr and Malyan (Alden 1978, 5, 11). The rim form in two vessel types (Fig. 50d, e) suggests comparisons with rims found on vessels at Hasanlu (56.10) and Fasa (3.3, 5). A more remote set of comparisons can be made with Byzantine forms, and so-called Coptic bowls, at such sites as Pella (44.1243, 1301), especially for the goblet form of base.

Other bowls range in form from the very diagnostic to the generic (e.g., Fig. 51f, g). Wares are generally buff, with some red and gray examples; decoration is very rare. There are six basic types:

A) Bowls with a profile forming a gentle curve or carination and high flaring rim are well known from Achaemenid into Parthian times (Fig. 51i-o). The ware is usually gray, red or orange-buff, with a red slip (Phase 1a, 1b). Parallels are found at Pasargadae (106.13, 16, 17), Persepolis (1957, 72.1), Hasanlu (58.6, 54.6), Ziwiye (58.9, 60.6), and many other sites of this time range. These bowls were found almost exclusively on the west slope.

B) Bowls with a sharp carination near a short everted rim form a second grouping (Fig. 51p-t, with Fig. 51u, y, z as possible variants). These have the same range of wares but without slips (Phase 1a, 1b). Comparisons are found at the same sites as Type A—at Pasargadae (108.4), Persepolis (1957, 89.7), Fasa (3.3.5), Ziwiye (58.2)—as well as Godin (1974, 45.17, 18). Again these were often found on the west slope.

C) Another distinctive shape, which has a sharply carinated inverted rim (Fig. 51b, c, e), seems to be a distant relative of the Hellenistic fish bowl. Wares are varied, from buff to black, with a deep-green-glazed variant (Phase 1b, 1c; ware is not recorded for Fig. 51e; cf. Dura Europos 1943, 28). Comparisons are from Pasargadae (109.17) and Susa (1977, 34.1); distribution is varied over the site.

D) A bowl type with a horizontal loop handle (Fig. 51ee; see below, Fig. 54h-j) is seen as a Parthian type with much older antecedents. Wares range from buff to gray and brown (Phase 1a-1b).

Such vessels have been found in northern and western Iran at Qumis (1974, 4.3) and Godin (1974, 48.8, 49.9).

E) Certain forms recall ceramics more typical of the Roman world, particularly late imitations of terra-sigillata ware (Phase 1b, 1c; Fig. 51f, cc). These pink and buff wares, especially those with a red slip, parallel ceramics from many sites in Palestine and elsewhere.

F) Larger bowls with an inward-beveled rim may be the sole form found at Qasr-i Abu Nasr that can confidently be dated to the Sasanian period (Fig. 51ii, kk). Wares are buff and cream (Phase 2a, 2b). This dating is based on numerous examples from Istakhr. It is indeed awkward that no distinctive bowls of the smaller size range can be yet identified with the later Sasanian occupation.

It is a great temptation to see the Sasanian Phase 2a as one marked archaeologically by large storage jars and, in general, cruder forms of ceramics. The series of crude basins, both the shallow oval types and larger, deep basins, seems to follow this tendency (Fig. 52a-r, dating this type to Phase 2a, 2b). This conclusion is strengthened by the incised wavy lines and punctates used for decoration (Phase 1c-2a). The function of these basins is uncertain; one (Fig. 52i) seems to have been a chafing or husking dish, judging from the roughened inner base. Whitehouse has made an interesting suggestion, based on Roman examples, that such large basins may have been inverted to serve as baking ovens (1978, 146, 147). Parallels may be cited from Pasargadae (124.4) and Susa (1954, 30.1210e), both of the early Islamic period.

Numerous lids were found on the fortress, mostly small in diameter (about 10 centimeters), both flat and slightly concave, with a tiny knob in the center (Fig. 53a-l). Wares are usually gray or red, but occasionally buff or cream. Slightly larger lids in the same tradition (about 15 centimeters in diameter) have incised decorations on the upper surface (Phase 1c, 2a; Fig. 53r-t).

Another, more unusual, form is a deep pot or a high foot attached to a shallow basin (Fig. 53w-z). Such vessels have been suggested as bases or feet (jar stands), with the basin filled with liquid to deter in-

sects (Phase 2a, 2b). A close parallel with the last of these (Fig. 53z) is found at Samarra (1940, 19.3, 21); the other types may be found at Susa (1977, 48.12).

More unusual forms are the spouted pots (similar to the crater form) (Fig. 54a, b, d, e), often with a handle. The round spout is attached to the shoulder below the everted rim. The ware is usually a cream or buff, with incised lines on the shoulder (Phase 1c, 2a). No precise parallel has been reported for this form. Somewhat similar is a spouted bowl (Fig. 54c) with two lug handles and incised lines near the rim. The rim is incurving with an inward bevel (similar to Type F in the bowls; see Fig. 51ii, kk). This comes from the Central House (Phase 2a-2b).

A series of bowls with horizontal handles attached just below the rim (Fig. 54h, i, j) is found either in a light buff or gray ware and may be related to bowl Type D (see Fig. 51ee). As with this previous example, parallels may be seen at Qumis (1974, 4.3), Godin (1974, 49.9), and other Iranian sites; similar shapes, much further removed, are characteristic of Byzantine sites, for example, Pella (45, 1281) and Caesarea (Riley 1975, 26, 27; Phase 1a, 1b). Two bases were found on the west side (Fig. 54f, g); the one with the more distinctive form and a gray slip (Fig. 54f) has parallels at Qumis (1974, 5.3) and Susa (1954, 27.2383; Phase 1a, 1b). There are also a gray-ware beaker with shaved sides and what is possibly the base of the beaker (Fig. 54k, m); the "base" has a parallel at Nimrud (3.16; Phase 1a, 1b). Finally a pilgrim flask was found on the west side; this had a red slip on an orange-gray body (Fig. 54l). Such vessels are well known from Pasargadae (115.4), Persepolis (1957, 72.12), Susa (1954, 39.1176), and Qumis (1974, 4.5a,b; Phase 1a-1b).

A number of unusual ceramics were found on the fortress, which may not belong to the periods of occupation of the fortress, for example, Islamic forms more typically found on the western site. Examples of these later depositions are represented in the two glazed lamps (Fig. 55c, d) which are variants of glazed lamps illustrated in Figure 26h and are also found in Susa (1977, 28.13). Likewise the chip-carved (*kerbschnitte*) ceramics (Fig. 55s, u, v) should be later than the periods on the fortress, though no examples were found in the western site; similar

wares are found at Samarra and at Siraf (Stein 1937, 149).

A small neck of an oil jar was found on the northern slope (Fig. 55a). Similar jars are known from Susa (1977, 28.7), and the form is common in the Roman world (Phase 1a, 1b). The fragments of painted wares may be chance occurrences from much earlier periods (Fig. 55e-m), though at least two sherds may also be seen in Pasargadae (Fig. 55f, m paralleled by 104.13; see also D. Stronach 1974, 55.2,6) and a third from Yahya (1970, 4 A, D, L parallel Fig. 55,l). Two fragments (Fig. 55,l, m) were found in the cribbing on the west slope. Also from Yahya is an example of a bridged spout (1970, 13 parallels Fig. 55n), found on many Iranian sites. Examples of blue-green glazed wares (Fig. 55p, q, r) seem typical of so-called parthian jars, especially the twisted-handle type common at Dura Europos (1943, 20 parallels Fig. 55r; all belong to Phase 1a, 1b).

The following groups of ceramics are presented as assemblages in that the recording allows a localization of the find spots, though again there is usually no indication of stratigraphy. The first area is Cut 1 (see Fig. 28). This trench produced the general range of ceramics found on the fortress (Fig. 56); especially to be noted is the large tub or basin (Fig. 56, o). Comparisons with the corpus from the rest of the fortress result in a suggested periodization indicating that this trench cut through deposits from each period of occupation, as is suggested from the architecture of this area.

Among the field notes are the following notations for objects from the floor of the Plaster Building (see Fig. 28, Locus 93):

- 1) Pink pottery with thick red slip
- 2) Fragment of small dish with typical Sasanian blue-green glaze [Fig. 51e?]
- 3) Edge of large bowl with red slip inside and combed decoration [Fig. 50i?]
- 4) Gritty greenish buff [with drawing of rim and neck of Fig. 47g]
- 5) Bright green, yellow [with drawing of rim of Fig. 46c]
- 6) Fragment of alabaster dish or cover [with drawing of Fig. 67i]

FIG. 51 Bowls

	Description	Location	Photograph no.	Accession no.
a	light red ware, dark red slip on interior and exterior, black and white decoration	W slope	F503	
b	black, porous ware	Rahim (77)		
c	buff ware	top (17)		
d	soft smooth buff ware	Hajji Askar (10)		
e	blue-green glaze on interior, whitish slip on exterior	Jaafar		
f	pink, soft ware	Rahim, top hump	F319.3	
g	pink, hard ware, buff slip	Haidar Husein, W side brick wall	F319.4	
h	buff-orange ware, dark red slip on interior and exterior	Husein Ali Agha, by fire altar		
i	dark gray ware	Hajji Ali Agha, W slope		
j	pink ware, purple-red paint on interior	Hajji Ali Agha, W slope	F506.7	
k	fine red ware	Ziyad, W slope (82)		
l	buff ware, polished	Hajji Ali Agha, W slope		
m	buff ware, red slip on interior and exterior	Ziyad, W slope	F495	
n	orange ware, red slip on interior and exterior, fine grit	Husein Ali Agha, W side; Haidar	F493, 494	36.30.50
o	fine buff ware, buff slip	Rahim (88)		
p	very fine smooth red ware	W slope		
q	buff ware, gray slip, burnished	Rahim (88)		
r	smooth pink ware	Hajji Ali Agha (near 54)		
s	smooth buff ware, brown burnished slip on exterior	Hajji Askar (10)		
t	smooth gray ware	below Abbas Isa, N slope		
u	coarse buff ware, buff slip	Ismail (6)		
v	fine gray ware	Ziyad, W slope		
w	fine smooth red ware	W slope		
x	smooth pink ware	Hajji Ali Agha (near 54)		
y	gritty gray ware	Hajji Ali Agha (near 54)		
z	pink ware, red slip	W slope		
aa	buff ware	Jaafar's tower		
bb	pink-buff ware	Jaafar's tower		
cc	buff ware, dark red slip, polished interior and exterior	Jaafar's tower		
dd	very fine and hard gray ware	Haidar Husein, W side below brick wall		
ee	brown ware, very fine polish	W slope		
ff	buff ware, greenish-white wash on interior and exterior rim	Jaafar		
gg	buff ware	Jaafar		
hh	buff ware, brown paint over neck and shoulder	Ali Akbar (A1)		
ii	coarse greenish ware	Husein Ali Agha, by fire altar		
jj	buff ware	W slope		
kk	buff ware	Ali Agha Noruz, room NW of Central House	F143.2	

FIG. 51 Bowls

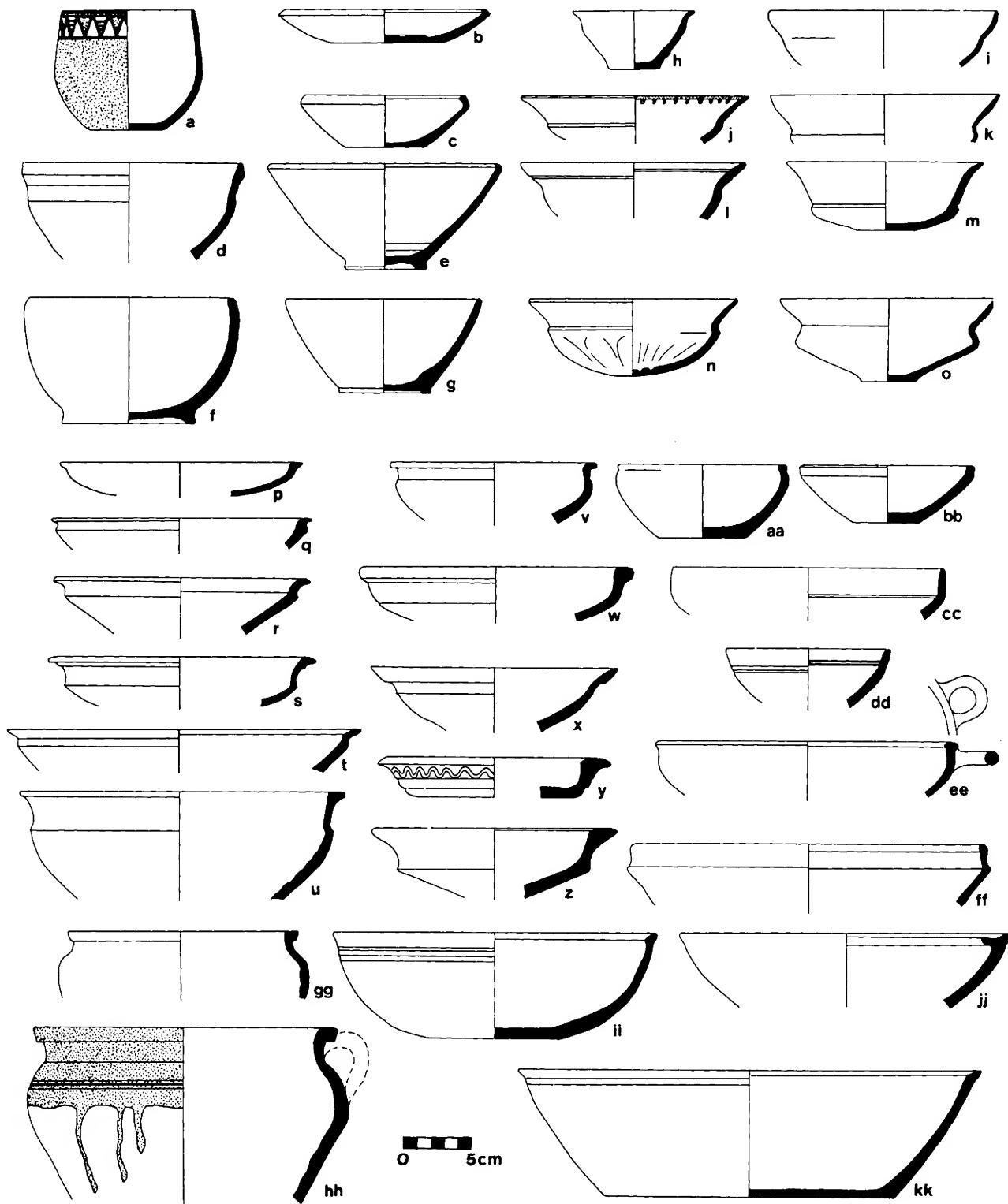


FIG. 52 Basins

	Description	Location	Photograph no.	Accession no.
a	pink ware	B, early		
b	coarse buff ware, bottom covered with plaster	A	F59	
c	orange-tan (pink) ware, 1 lug, heavy grit temper	Ziyad, W slope	F491	36.30.53
d	gray ware, coarse, grit temper	N slope (13)		
e	coarse buff ware, oval	Mirza Husein, NE edge (beyond 74)		
f	coarse pink ware	Ali Hashimi, room N of Central House (11)	F143.1	34.107.54
g	gray ware, black burnished slip on interior and exterior rim	Museiyib, W slope		
h	gritty buff ware	Rahim, S slope of brick terracing (88)	F492	
i	greenish cream ware, punctate	Mirza Husein, A		
j	buff ware, dark red slip on interior and exterior rim	N side		
k	coarse buff ware	Abbas Hashimi		
l	red ware, red slip on interior and exterior rim	Rahim (near 86)		
m	coarse gray ware, incised	Abbas (9)		
n	hard pink ware, red slip on interior and exterior rim, repaired	Room N center		
o	smooth buff ware	Ali Masum Ali, W end of Cut 1	F144.1	
p	buff ware, red slip on interior and exterior rim	Akbar, Ali Agha Shawaris, A, N of fire altar	F144.2	34.107.55
q	light orange ware, red slip on interior and exterior rim, burnished, grit and chaff temper	Museiyib, top N side		
r	coarse greenish ware, incised, diam. ca. 120 cm.			

FIG. 52 Basins

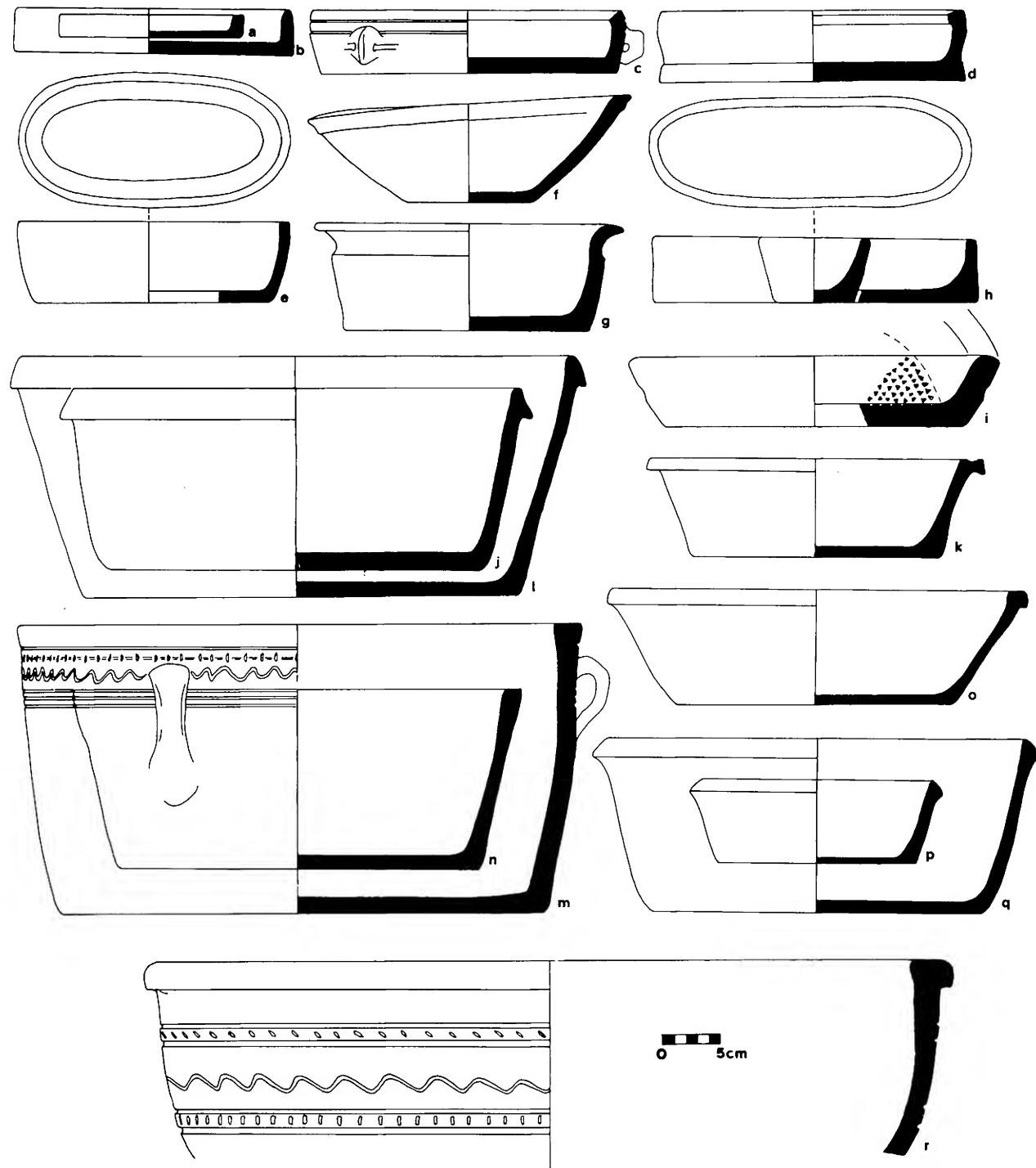


FIG. 53 Lids and stands

	Description	Location	Photograph no.	Accession no.
a	plaster	N		
b	crude red ware	A	F343.9	
c	gray ware	N	F343.4	
d	buff ware, dark red slip	A(?)	F343.11	
e	red ware, polished red slip, grit temper	Husein Ali Agha, NW corner	F343.10	34.107.45
f	stone	W end, Cut 1	F343.12	
g	buff ware	Ali Agha, A	F343.5	
h	buff ware	Hajji Ali Agha, near candlestick	F343.8	
i	greenish white ware	Husein Ali Agha (5)		
j	buff ware	A		
k	pink ware	A(?)	F343.7	
l	buff ware, greenish white slip	Husein Ali Agha (5)		
m	pink ware, buff slip	Arab (13)	F343.1	
n	dark gray ware	N slope	F343.6	
o	plaster	N		
p	mud	N		
q	plaster		F504.1	
r	gray ware	N side		
s	coarse pink ware, buff slip			
t	dark gray ware	Arab (13)	F343.2	
u	buff ware, heavy grit temper	N slope (8)	F343.3	36.30.46
v	yellow ware, blue-green glaze	A		
w	gray ware	Kerim (near 93)		
x	buff ware	Hajji Ali Agha, B	F145.1,66	
y	cream (gray-green) ware, large grit and chaff temper	Hajji Ali Agha, A, E side	F146.1,65,66	34.107.38
z	buff-tan ware, grit and much chaff temper	Kerim, N room top	F146.2, 61	34.107.39

FIG. 53 Lids and stands

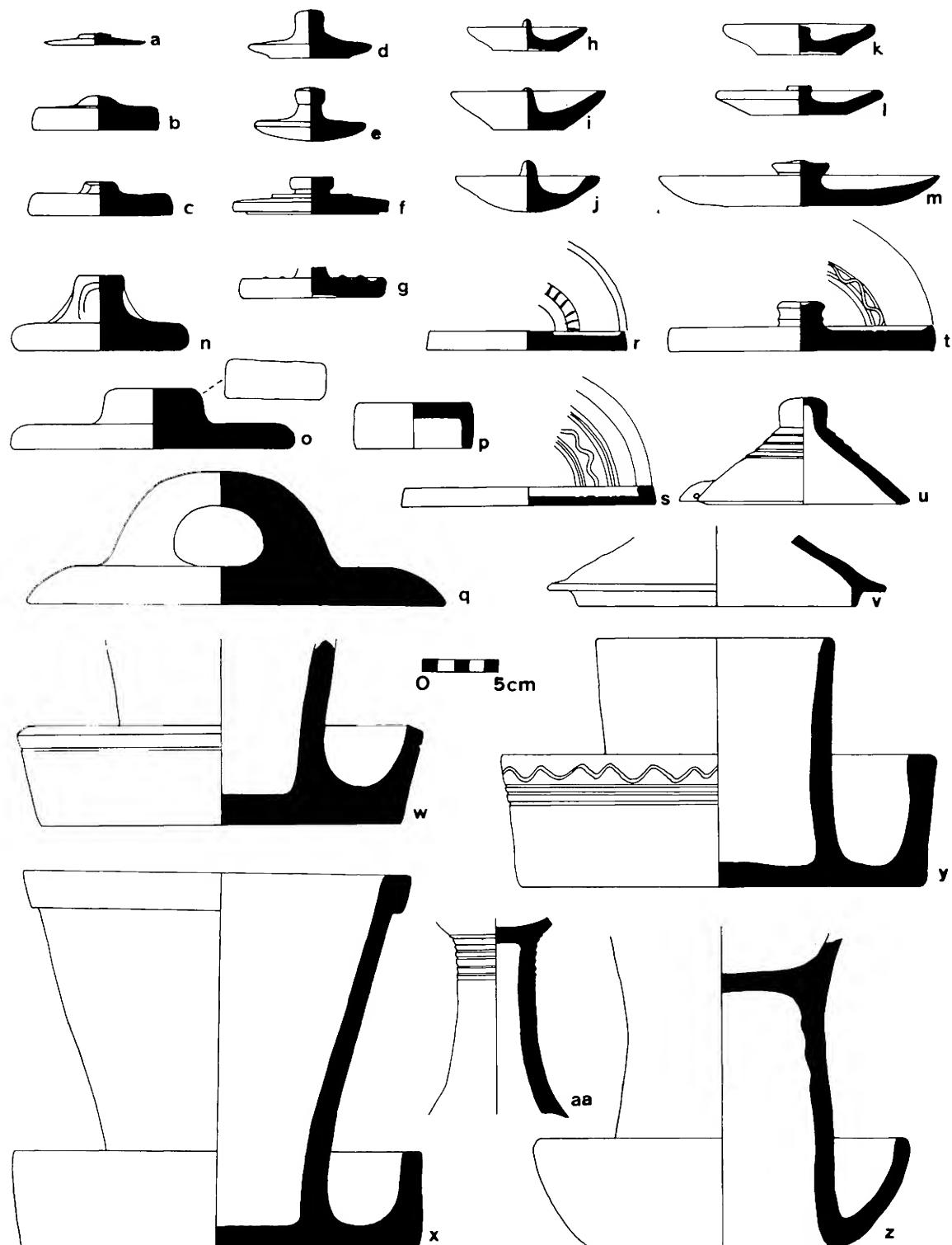


FIG. 54 Miscellaneous ceramics

	Description	Location	Photograph no.	Accession no.
a	black paint on interior and exterior	Ziyad, N corner		
b	buff ware	W side (8)		
c	black-tan ware, 2 triangular lugs, grit temper	Ali Masum Ali, 2d room from entrance, Central House (29)	F141.1	34.107.29
d	cream ware, shaved base, grit and chaff temper	Cut 3, S end (40)	F56, 150.1	34.107.40
e	buff ware	Muhammad Husein, next to room with sealings, E side	F150.2	
f	brown ware, dark gray slip on exterior	Haidar Husein, brick wall W side	F133.2	
g	buff ware	W slope (8)	F331.5	
h	buff ware	Hajji Ali Agha (4)		
i	whitish gray ware, gritty temper	Mirza Husein, NE edge	F330.5	
j	very smooth fine buff ware	Hajji Askar (10, near 44)		
k	fine gray ware, shaved, grit and chaff temper	well near village	F605	36.30.43
l	gray ware, red-orange surface, red-brown slip on exterior, burnished grit temper	Haidar, W side by brick wall	F344.5	36.30.47
m	coarse pink ware	B, early		

FIG. 54 Miscellaneous ceramics

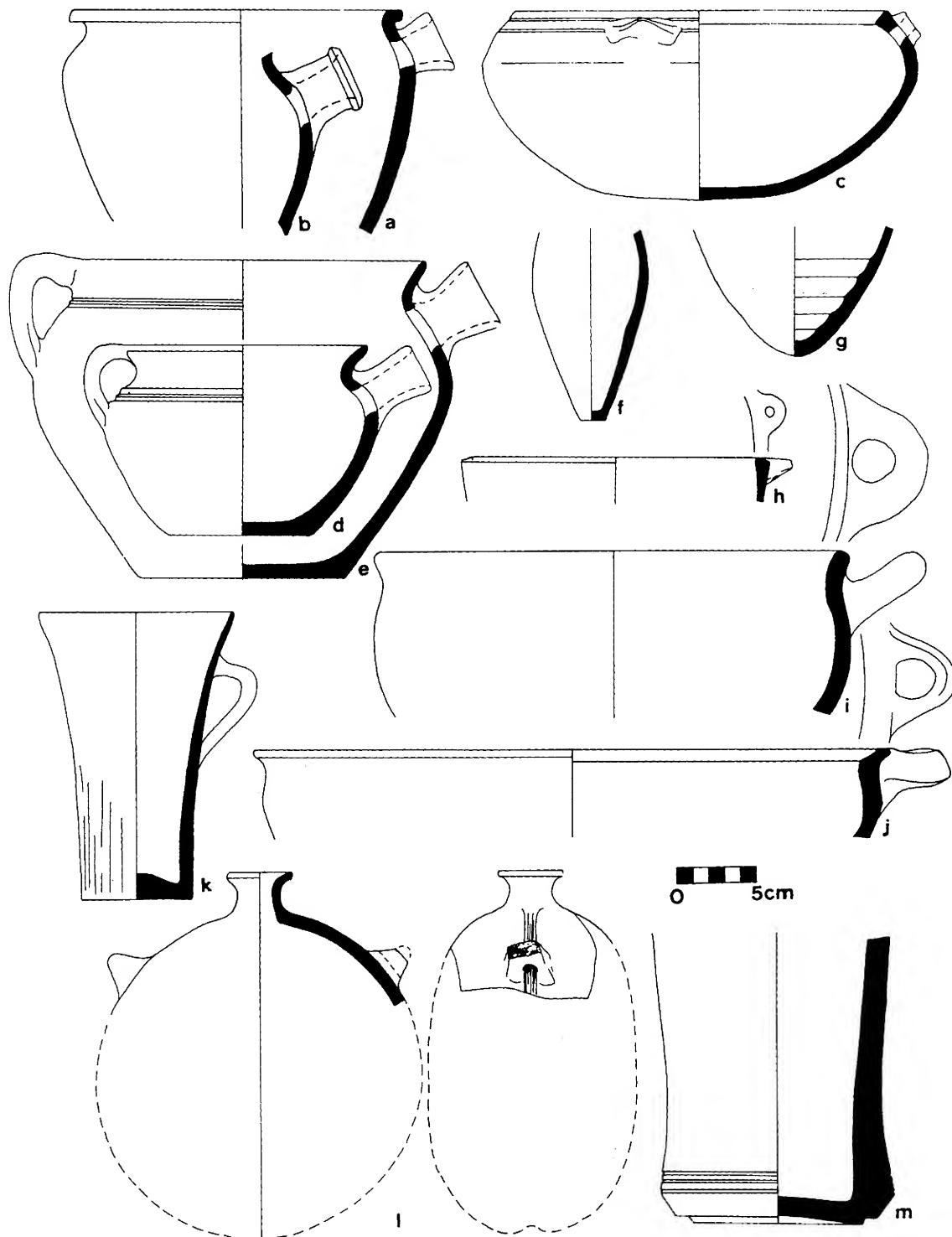


FIG. 55 Miscellaneous ceramics

	Description	Location	Photograph no.	Accession no.
a	greenish white ware	N slope		
b	dark gray ware	Hajji Ali Agha (4)		
c	yellow ware, blue glaze	Hajji Riza, N slope	F155.1	
d	yellow ware, blue glaze	Hajji Riza, N slope		
e	greenish white ware, black paint	A	F348.1	
f	greenish white ware, black paint	N slope	F348.5	
g	buff ware, black paint	Rahim, S slope of platform (88)	F348.4	
h	greenish white ware, black paint	A	F348.3	
i	gray ware, black slip, yellow paint	Museiyib, N side		
j	gray ware, black paint, 6 mm. thick	Hajji Ali Agha		
k	smooth greenish white ware, black paint, 5 mm. thick	Hajji Ali Agha		
l	buff ware, black paint	Ismail, Jaafar, 2d crib, W slope	F347	36.30.48
m	brown ware, cream-tan slip, burnished, red paint, fine grit temper	Ismail, W crib		
n	dark gray ware, buff slip	N slope (13)		
o	dark gray ware	B, early	F330.2	
p	yellow ware, blue glaze, incised, 1 cm. thick	A		
q	buff ware, blue-green glaze on interior and exterior	Husein Ali Agha, by fire altar		
r	buff ware, blue-green glaze, twisted handle	N slope		
s	red-brown ware, red slip, burnished, excised decoration, grit temper	W slope (38)	F340.1	36.30.45
t	red ware, black slip	Hajji Riza, E end of N slope		
u	buff ware, excised decoration, 12 mm. thick	Husein Ali Agha, by fire altar	F330.6	
v	buff-orange ware, black slip, excised decoration	Jaafar's wall	F341	

FIG. 55 Miscellaneous ceramics

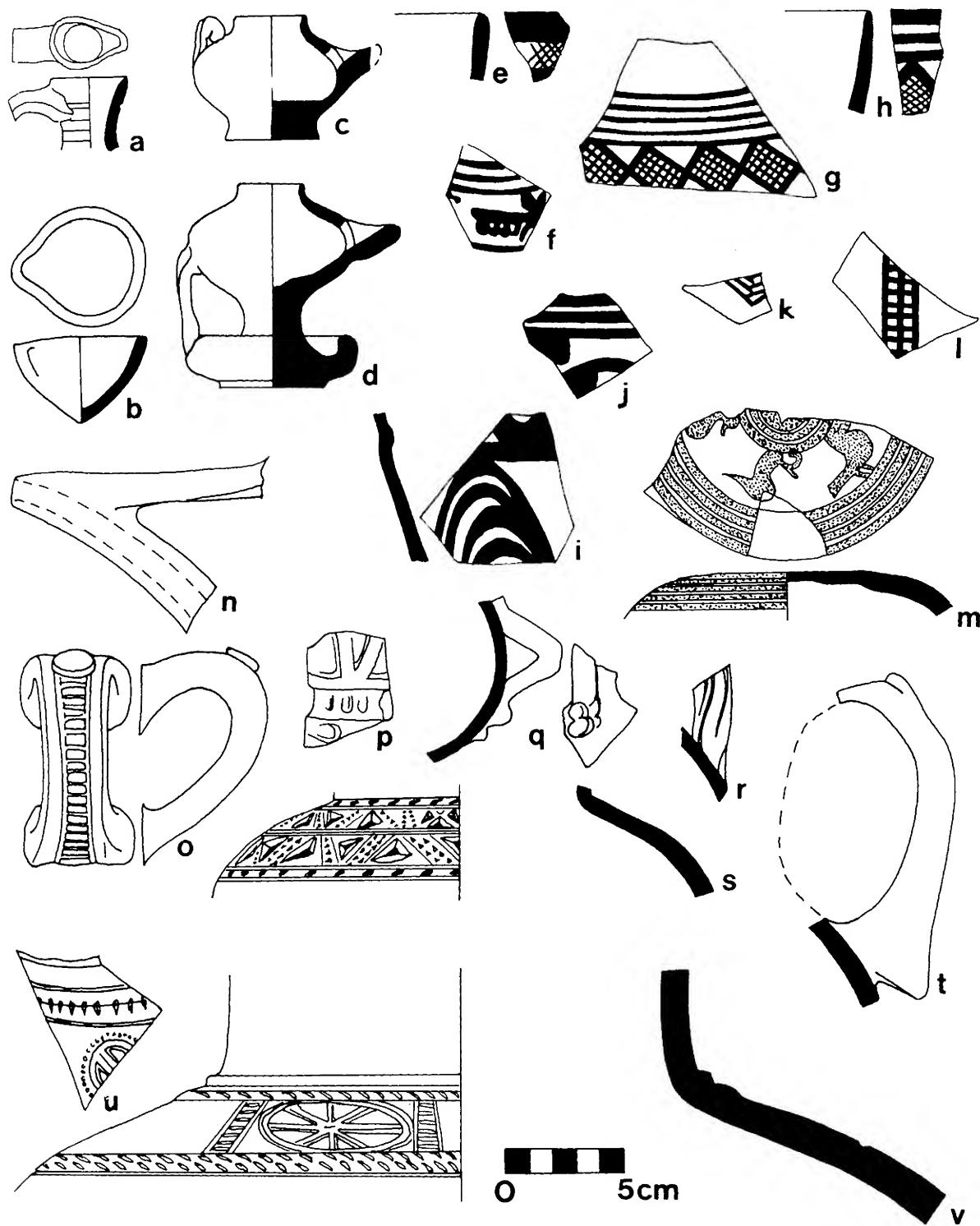
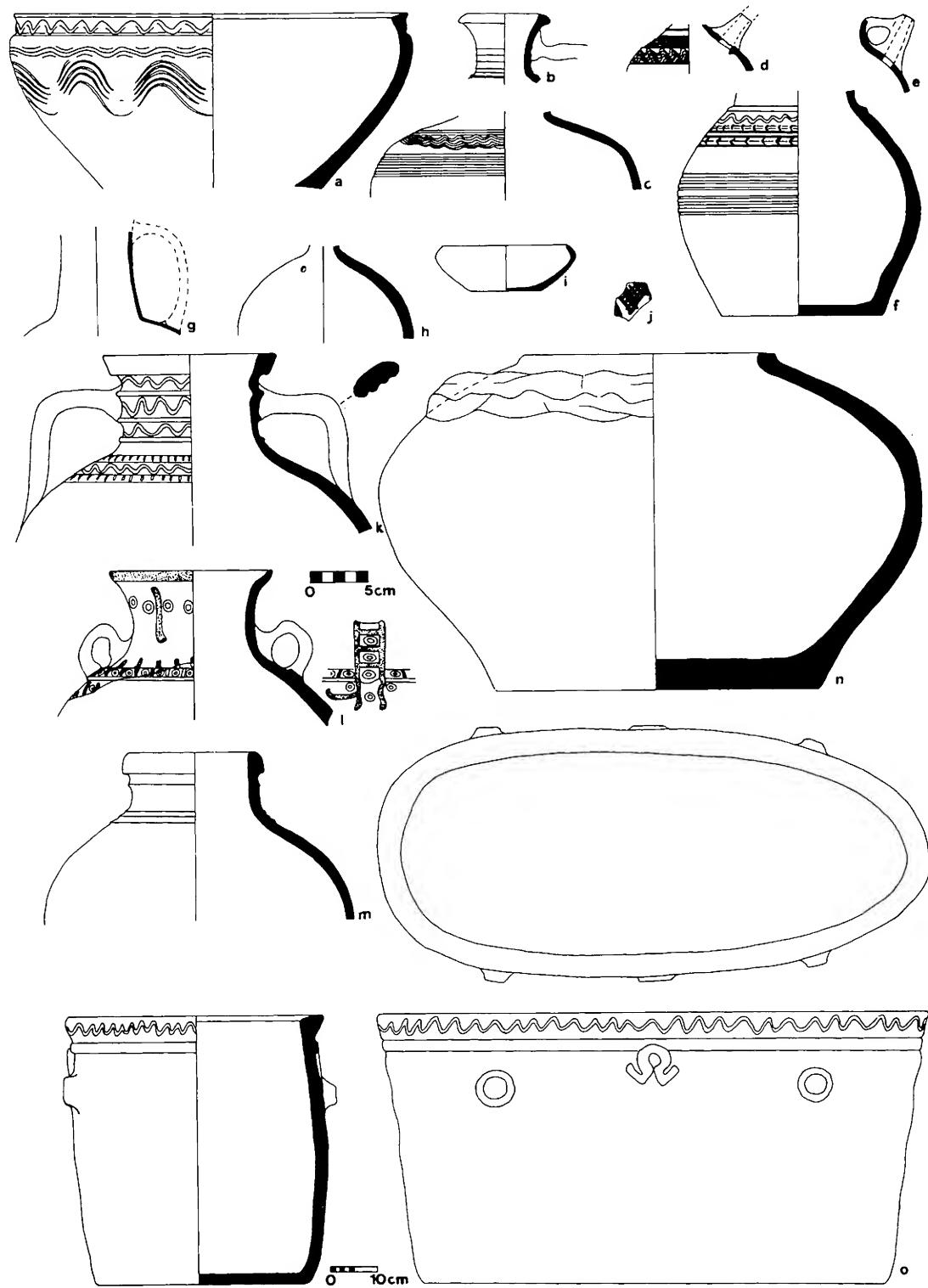


FIG. 56 Ceramics from Cut 1

	Description	Location	Photograph no.	Comparanda (Figures)
a	pink ware, buff slip on interior, dark red slip on exterior and rim		F335.1	50g
b	fine gray ware, dark gray slip	bottom		46g (?)
c	hard greenish buff ware			45a (?)
d	greenish white ware			46b
e	gray ware			46b
f		Hajji Riza, E end, A	F330.1 F152.3	46i (?)
g	pink ware, dark red slip, polished on exterior			
h	buff ware, pierced hole	E end		48b
i	hard red ware, black core	12	F318.1	51b, c
j	greenish white ware, black paint			55g
k	pink ware, dark red slip on exterior	bottom, E end	F118.1	43k
l	gray ware, buff slip, red paint	Hajji Ali Agha, bottom	F129.2	49 (but larger)
m	pink ware	Hajji Ali Agha, E end		46q (rim)
n	coarse pink ware, buff wash on exterior, plaster from sealed cover	center	F64, 98	42d (?)
o	coarse pink ware, buff wash on interior and exterior	top N side, not cut 1	F81,82,324	41c (rim)

FIG. 56 Ceramics from Cut 1



The general impression of this assemblage is that it would belong to the second phase of the occupation, suggesting either a mixed collection or continued use of the Plaster Building into the second period, which is unlikely.

The area called "Mirza Husain's hole" (or "holes") appears to be a discrete archaeological unit on the top of the fortress. Photographs indicate a small excavation, perhaps 2 x 4 meters in size; Photograph F₄₂ is described as in the "center by the first trial pit" and F₂₉₈, a slightly different angle of the same area, is described as a "room south of the Central House with Mirza Husain's Cut 1." This identity and location are important; Cut 1 was presumably the first trench excavated across the fortress (east-west) in the manner of the cuts in the town.

The photographs of this trench seem to show the north end of a narrow room, the direction determined by the mountains in the background. The northern portion has been excavated down to a floor level, upon which one large jar lies on its side. A second jar was evidently buried up to its neck below the floor. Excavations were continued beside and below the second jar; at about a meter below the floor the soil may have become loose, making the excavation into a round hole, which would explain the outline of the shadows cast (pl. 38).

The ceramics are occasionally located as coming from "above the plaster (gatch) floor" and from "2.5 feet below the plaster." Two jar shoulders were found above the floor (Fig. 57, o, v) as was a glazed handle; below the floor were two red painted sherds (Fig. 57g, h). Also "low down near the stones, a fragment of a greeny-white shoulder (8mm thick) with a painted black band more than 10 mm wide" was found. About half of the drawings are labeled "no. 5," which confirms an identity with Locus 5. These sherds were all buff wares, mainly bowls with one handle; two red-painted shoulders (Fig. 57f), a black-painted fragment (Fig. 57e) and a gray-ware sherd with black slip and comb decoration (Fig. 57r) were also found. This range is similar to that of the entire assemblage, which mainly consists of bowls with a few jar forms. Red-painted wares occur with burnished red or brown slips; gray wares have black-burnished slips.

The rather haphazard occurrence of ceramic comparanda is somewhat unsatisfactory; it may be

useful to conclude this presentation with a brief examination of the few excavated sites with materials most directly comparable to the corpus from Qasr-i Abu Nasr.

The first is the Achaemenid palace complex and terrace citadel known as Tall-i Takht at Pasargadae. The stratigraphy on Tall-i Takht showed four periods of occupation, the last of which (Period IV) D. Stronach described as early Islamic of the seventh and eight centuries, although it may as easily have been late Sasanian (1978, 163; architectural remains of this period at Tall-i Takht were minimal and hence are not considered above). The ceramics often include almost completely identical pieces; Pasargadae 123, 124 compare with Qasr-i Abu Nasr Figures 40c, d, e; 41a; 43h, k; 46k, m; 47e, i, l; 52g; 53n; 77i, q; 78q. Comparisons with the earlier periods of Tall-i Takht are found in what are called simply "post-Achaemenian" periods (II, III) because of the difficult stratigraphy on that site (ca. 500-180 B.C.). Comparisons may be found with the fortress ceramics represented by Figures 41h; 42f, k; 47e; 48d, e, p; 49k, t; 51c, j, o, r, u, y; 55f, m; 56i; 57f, k, h; 78k, n; and 79k, q (Achaemenid types: Figs. 51m; 54, l; 57a). The general absence of purely Achaemenid types suggests that an Achaemenid occupation at Qasr-i Abu Nasr is very unlikely. At the same time, an early occupation in Seleucid or Parthian times is confirmed.

The excavations at Malyan, not far from Baiza in the Persepolis plain, produced a limited amount of Parthian and early Sasanian pottery in its latest occupation. A few of these were associated with burials (Balcer 1978, 7 parallels Fig. 49n; 8 parallels Figs. 19j, 76j; 9 parallels Fig. 62v; IIb parallels Fig. 64h; IIIf parallels Fig. 64v), including nonceramic artifacts. A larger ceramic collection was found "contextually associated" with a kiln, many from a pit of the "same stratum as the kiln" (Alden 1978, 82). The kiln has been dated to A.D. 300. Comparisons may be listed as follows (Qasr-i Abu Nasr, then Malyan): Fig. 16h, 6.15; Fig. 43k, 6.7; Fig. 50b, n, p, 6.21, 5.8, 9; Fig. 52b, d, h, l, m, o, q, qq, 6.18, 19, 20, 24, 5.11, 14, 6.23; Fig. 76t, u, v, 6.17, 10, 8; Fig. 77q, 5.11. The Malyan ceramic forms represent only a fraction of the types recovered at Qasr-i Abu Nasr, perhaps because the Malyan kiln was specialized. Nevertheless the types that do compare seem to offer

a precise corpus of late Parthian and early Sasanian forms. This period (Phase 1) at Qasr-i Abu Nasr fortress may be amplified through examination of Iranian sites further afield.

The site of Shahr-i Qumis in northeastern Iran is one of the few carefully excavated Parthian sites, and in view of the alleged comparisons with Qasr-i Abu Nasr (Hansman 1968, 127; Hansman and Stronach 1970, 34, 35 n. 24) parallels with the limited published corpus may be examined. A "bevelled rim" is shown only once (1970, 15.5), on a jar with no precise parallel in the Qasr-i Abu Nasr corpus. Closer connection may be seen in the juglets (1970, 15.6; 1974, 5.2 parallel Figs. 16h, 45c, d, 61u); incised bands occur on bowls, though apparently not on the juglets. Smaller, fine jars (1970, 14.9; and perhaps 1974, 4.2) are reminiscent of the burnished jars (Fig. 48j, m).

Connection with Qasr-i Abu Nasr may also be seen in the deep, spouted bowls (1970, 14.1) which recall those of Figure 54d, e, especially if the tubular spouts mentioned by Hansman (1968, 128) belong to such vessels. The horizontal loop handles on this and other bowls (1970, 14.8; 1974, 4.3) are found on other bowl forms (Fig. 51ee). Parallels among the bowl shapes vary from identical to vaguely similar (1970, 14.3 parallels Fig. 51r; 14.4, Fig. 57s; 14.6, Fig. 51l; 14.7, Fig. 51bb; 15.2, Fig. 23g, h; 1974, 4.3, Fig. 51ee). Other points of comparison are the handles (1970, 13.5 similar to Fig. 55t; 13.3 close to a metal handle Fig. 62, o), basal spouts (1974, 5.1a, b parallels Fig. 17h), and the pilgrim flask (1974, 4.5a,b similar to 54.l).

While the surface collection from Qumis has, ironically, the same potential mixture as at Qasr-i Abu Nasr (a twelfth- to thirteenth-century occupation), the vessels from the excavations seem to be Parthian in date, based on coins. The one Sasanian coin (Bivar 1970) confirms the continuation of the site into the Sasanian period; the date of destruction of these buildings cannot be determined in any specific case.

The comparisons cited are more interesting in view of the strong regionalization in the Parthian period and the connection they provide with earlier Iron Age materials from western Iran. The sites of Godin (1974), Nush-i Jan (R. Stronach 1978), and Baba Jan (Goff 1970) all exhibit vague parallels with

the ceramics from Qasr-i Abu Nasr, although the entire ceramic corpora clearly show the temporal distance.

One further site should be mentioned in the light of total artifactual assemblage and not simply the ceramics. This is Qal'eh Dukhtar, the fortress above the Sasanian city of Jur (see Fig. 35). Excavations at this site have been preoccupied with investigation of the major structure, although a few other areas have been excavated. The preliminary descriptions of this work and the limited number of artifacts published (Huff 1976, 1978) do not give close stratigraphic information, but the occupation may extend from the early Sasanian period into the early Islamic. What is extremely interesting about the cultural assemblage presented in the preliminary reports is the close similarity it has with that of Qasr-i Abu Nasr. When the final report of Qal'eh Dukhtar is published, many of the problems of the Qasr-i Abu Nasr excavations should be clarified.

The similarity of these two fortresses becomes clear in the artifact comparanda:

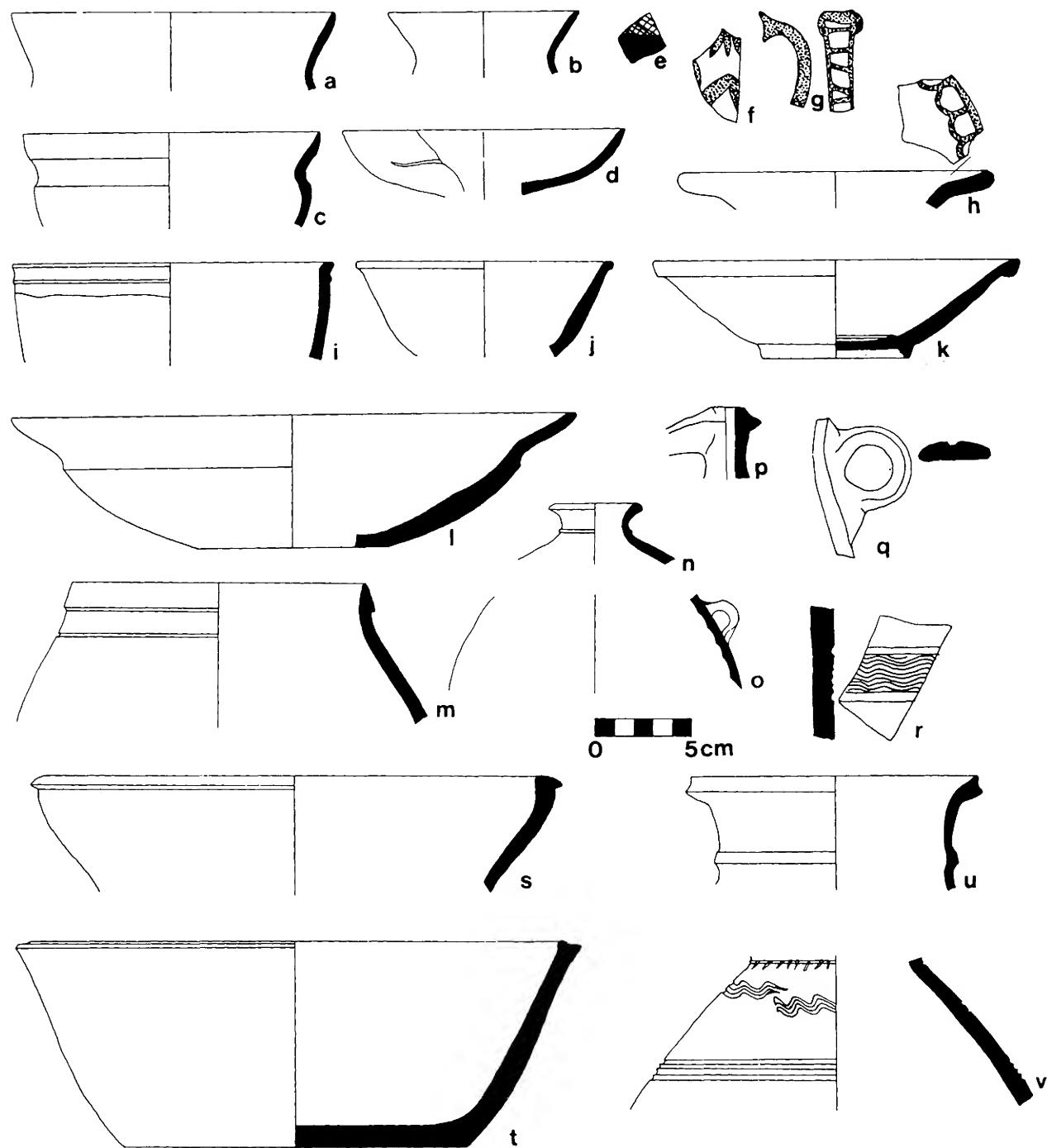
<i>Ceramics</i>	Fig. 40a = 1978, 29
	Fig. 41a, d = 1976, 48.2; 1978, 24, 25
	Fig. 43d, k = 1976, 6c; 1978, 26, 27
	Fig. 46c = 1978, 31
	Fig. 47i, f = 1976, 6a, b
	Fig. 57i = 1978, 28
<i>Glass</i>	Fig. 58c, z = 1978, 22, 23
	Fig. 59bb = 1978, 20
<i>Metal</i>	Fig. 61g = 1978, 41.6
	Fig. 63e, y, z, jj = 1978, 42.5, 5b, 5c, 4
	Fig. 64p, v similar to 1976, 7a, b
	Fig. 65a = 1978, 42.6
	Fig. 66b, d = 1978, 13, 14, 20
<i>Stone</i>	Fig. 68dd = 1976, 46.1
<i>Miscellany</i>	Figurine: 72i = 1976, 7c
	Mother of pearl: pls. 53, 54 = 1978, 41.1
	Jar inscription: pl. 41 = 1978, 44

One may hope that the precise field work of Huff and his associates will provide not only a full corpus

FIG. 57 Ceramics from Mirza Husein's holes

	Description	Location	Photograph no.
a	smooth gray buff ware, dark red slip on interior and exterior		
b	smooth buff ware		
c	fine buff ware		
d	smooth buff ware, incised decoration		
e	fine buff ware, black paint, 2 mm. thick	5	
f	buff ware, dark red paint	5	
g	pink ware, dark red paint	deep	F506.11
h	buff ware, dark red paint, diameter approximate	75 cm. below plaster	F506.6
i	smooth buff ware, dark red slip on interior and exterior rim	5	
j	buff ware		
k	buff ware, buff slip		
l	pink ware, buff slip		
m	gray ware, black slip		
n	very fine light gray ware	5	
o	gritty dark gray ware	above plaster floor	
p	gray ware, polished black slip		
q	gritty buff ware, light gray slip, diam. ca. 12 cm.		
r	gray ware, polished black slip, deep comb decoration	5	
s	smooth buff ware, diameter approximate		
t	coarse gray ware		
u	smooth light gray ware		
v	pink ware, incised	on plaster level	

FIG. 57 Ceramics from Mirza Husein's holes



of comparable artifacts but also contextual assemblages that will move beyond the typological categories necessarily imposed on the Qasr-i Abu Nasr materials.

Glass

The glassware from the fortress forms a corpus of Sasanian glass that is probably typical of such material during this period. It is unfortunate here, as elsewhere, that the objects cannot be further refined into a Partho-Sasanian and a late Sasanian association. The glass itself is almost entirely light green or clear (called "white" by the excavators), with some yellow or yellow-brown and only two pieces of blue (see below, Fig. 59r, u).

A number of small vials, or unguentaria, were found; these have either round or elongated bodies (Fig. 58a–h) and narrow necks, with one exception (Fig. 58d), which is more properly a small jar. The form of the only other small jar (Fig. 58v) seems to imitate stone vessels. Small jars and vials are common, and close parallels are found at Qal'eh Dukhtar (1978, 22 parallels Fig. 58b; 1978, 23 parallels Fig. 58c) and Mahuz (1968–69, 153.17). Excellent detailed glass studies are available for Mahuz and other Mesopotamian sites (Negro Ponzi 1968–69, 1970–71a, 1972; see also Lamm 1928); many general similarities exist between the glass of these sites and that found at the Qasr-i Abu Nasr fortress, but exact parallels are rare, perhaps because of the mutable nature of glass.

An unusual vial (Fig. 58i) is a double cylindrical form with trailed glass decoration, a type Lamm thought to be Syrian of the sixth or seventh century (1929–30, pl. 25.15). The form of this container compares with that of the more elaborate balsamarium (Fig. 59, 1), which has ribboned glass on the double vials that seem to represent the load on the back of a camel. Such balsamaria are often found in collections and were identified as Syrian of the sixth century by Lamm (1929–30, pl. 20.26; also pls. 20.28, 29; 21.2, 3); a close parallel was found at Susa (1928, 77.4). Larger jars decorated with trailed glass (Fig. 58j, 1, s) or raised facets (Fig. 58k) often occur in glass collections and are taken as typically late Sasanian or early Islamic types (e.g., von Saldern 1974, 332, 333, 274; seventh to ninth

century). Lamm saw a Syrian inspiration for this decoration and often dated such glassware to about A.D. 500 (1929, pl. 20.8, 10, 18, 22, 23, 25; especially at Susa 1928, 76.5, 77.3). Similar decoration, especially ribboned shoulder or neck bands, recurs on medieval glass (an example from Bishapur could date to either period; Ghirshman 1938, IX.3).

Such trailed glass decoration also occurs on bottles, distinguished by their narrow necks and piriform bodies (Fig. 58m–r, t, u). Rims are usually slightly flaring; some are thickened and slightly incurving. The small handles and zigzag decoration on one bottle (Fig. 58t) suggest a sixth- to eighth-century date (as in Lamm 1935, pl. 42B; 1929, pl. 21.10). The basal knobs (Fig. 58u) may indicate an earlier date (Mahuz 1968–69, 156.51; von Saldern 1974, 116). The overall form, ignoring the decorative elements, seems to have continued from as early as the second century (Pella, 264) through the Sasanian (Kish 1934, 24) to Hama (1967, 27, 51, 106, 178; ninth to eleventh century); many parallels again suggest a Syrian direction.

Continuity of a simple functional form is of course to be expected and is certainly characteristic of larger bottles and jars (Fig. 58x–hh). These blown-glass vessels have high kick-ups in their bases (when preserved) and either wide or relatively narrow necks. Rims again are simple or slightly flaring; several rims show a second type, thickened and folded inward (Fig. 58z, aa, cc). This latter rim type is paralleled at Islamic Seleucia (1970–71a, 31, 49). Decoration is rare, confined in these examples to Figure 58x with pinched ribbing on the neck; a similar technique is found at Qal'eh Dukhtar (1978, 21) and at Hama (1967, 76), suggesting this to be a late Sasanian or early Islamic form. One example of the jar necks can be more precisely identified (Fig. 58w): this is a typical form of Roman glass, datable to the first or second century A.D., characterized by its broad flat rim and double handles.

The open-form glass vessels consist mainly of simple beakers and bowls. The beakers are relatively thick-walled, apparently with cut marks on the interior (Fig. 59z, bb, possibly x). A close parallel is found at Qal'eh Dukhtar (1978, 20 parallels Fig. 59bb). The simple bowl forms (Fig. 59t, u, w, y) have thickened and incurving rims, sometimes possibly folded over. Cut decoration or faceting occurs on both beakers (Fig. 59aa, with parallels at Kish 1934,

3.12, 4.7) and bowls (Fig. 59m, s, v). This technique is used to identify late Sasanian glass in collections (e.g., von Saldern 1974, 271), but it occurs in earlier contexts as well (at Dura Europos 1963, 26, 7.248; second to third century A.D.). Another type of decoration is molding, as on the two bowls with basal ribs. One of these (Fig. 59, o) has late Sasanian or early Islamic parallels (Lamm 1935, pl. 18B), whereas the other (Fig. 59n) recalls earlier Roman pillar bowls (Goldstein 1979, pls. 327–32). Similarly the finer molded (or pinched?) decoration on one of these bowls (Fig. 59h) may be Roman in inspiration (e.g., Dura Europos 1963, 28), as with the more unusual forms (Fig. 59b, g, h).

The remaining pieces of glass have more distinctive attributes. A number of handles occur, both simple (Fig. 59i) and decorated with twisted bands (Fig. 59j). Glass prunts, flattened with a cross-hatched mold, seem to have been added to glass vessels and recall the unusual decoration on a large ceramic jar from the western area (Fig. 21t), dated to the early Islamic period. A larger example of molded faceting (Fig. 59e) also appears to be early Islamic (Lamm 1929–30, pl. 53.5; at Islamic Seleucia, Negro Ponzi 1970–71a, 48.156).

A well-known type of glassware is the so-called cupping bowl, more likely a small alembic (Fig. 59a), again very likely to be early Islamic in date (Susa 1928, 75.5). Perhaps more distinctively late Parthian or early Sasanian is the curious molded mask (Fig. 59c); this piece was hollow and evidently attached to a larger vessel. Examples of such masks are known in Fars province from Tall-i Zohak (Fasa; Stein 1936, 29.27) and from Istakhr; they seem to be related to a type of head mask found throughout the Roman Empire in the third and fourth centuries (JGS 14 [1972]: 12; Lamm 1928, pl. 15.2) and on glazed ceramics from Dura Europos (1943, 3B, 20C). Parallels for the series of simple glass dolls (Fig. 59d) are rare.

It may be interesting, in light of the corpus of glassware from the fortress, to examine the glass found in the western area (Fig. 26i–t). One piece from the fortress (Fig. 59r), with a flaring rim and trailed glass decoration, seems to be related to the rim forms in Figure 26i, j. This rim form and that with an external ridge (Fig. 26, l, m) would seem to be early Islamic. Only the incurving rim (Fig. 26n), the cut decoration (Fig. 26, o), and perhaps the base

(Fig. 26s) may be late Sasanian. The two vial bases (Fig. 26q, r) illustrate forms distinctively Islamic, as do the neck forms and molding (Fig. 26k, p). The folded base ring (Fig. 26t) might be either Sasanian or Islamic, but in the present context more likely Islamic.

Minor Artifacts

The excavations at Qasr-i Abu Nasr recovered a broad range of objects that are generally termed minor, articles of daily use that, even more than the ceramics and glass, help to characterize the culture of this site. These include metalwork (from vessels, weapons, and tools, to jewelry); stonework (from vessels to beads); objects of bone, ivory, and mother-of-pearl; and figural art in various media. Such artifacts are, for the archaeologist, some of the most interesting discoveries and the most difficult to publish. Publications of the full corpora of minor objects is exceedingly rare for two reasons; first, portability and intrinsic value encourage long usage, making stratigraphic location (often poorly recorded in any case) unreliable; second, context of the discovery and ethnographic analogy are often the only clues for identification and interpretation of broken, corroded detritus.

The identification of ceramics and glass has been difficult for the Sasanian and early Islamic period in southern Iran; the case is more extreme for minor objects. Perhaps one of the finest publications of minor objects is that from the excavations at Corinth. Davidson was first to admit that “the study and classification of this large amount of diversified material has proved a long and complicated task. . .” (1952, v). This study is a convenient model for the Qasr-i Abu Nasr minor objects, even though the present study cannot approach its comprehension of classification, identification, and historical interpretation.

The Corinth excavations present an interesting model mainly for the overall similarity of the cultural repertoire and the chance correlation of chronology of occupation. Although Corinth contained Greek and Hellenistic remains in its early levels and Venetian and Turkish materials in its later levels, the vast majority of the minor objects from Corinth belong either to the Roman (early Roman, 44 B.C. to the end of the third century of our era, and late Ro-

FIG. 58 Glass from the fortress

	Description	Location	Photograph no.	Accession no.
a		Room W of Central House	F188.2	
b		B, 60 cm. deep	F188.3	
c	dark green	Kerim, E slope	F543	36.30.58
d		top of fortress	F391.6	
e		room top N side	F187	
f				
g		Rahim, E of fire altar	F188.1	34.107.70
h				
i	clear	top of fortress	F391.7	
j	clear	N side, top	F384.4,6	
k	greenish, clear	top of fortress	F383.1	
l	yellowish, clear	E of Abbas Isa (15)	F380.10	
m	greenish, clear	top of fortress	F391.3	
n	yellowish, clear	top of fortress	F391.4	
o	yellowish, clear	Abbas Hâshimi, room N side	F380.2	
p		Ali Askar, burnt room, top	F184.2	
q		top of fortress	F391.2	
r	greenish, clear	top of fortress	F391.1	
s	clear	top of fortress	F380.11	
t				
u	clear	top of fortress	F380.8	
v	dark green			
w		top of fortress	F391.8	
x	greenish, clear	Hajji Ali Agha, W end of Cut 1	F496.2	
y	light green		F582	
z	greenish, clear			
aa	green	top of fortress	F496.1	
bb	green	Hajji Riza, mud enclosure wall near entrance to fortress	F184.1	
cc	green	top of fortress	F391.5	
dd	greenish, clear			
ee	light green or clear	Ziyad, on top	F387.2	
ff	clear	top of fortress	F380.1	
gg	clear	top of fortress	F380.5	
hh	light green	Ibrahim, room with 2 stone bases	F387.1	

FIG. 58 Glass from the fortress

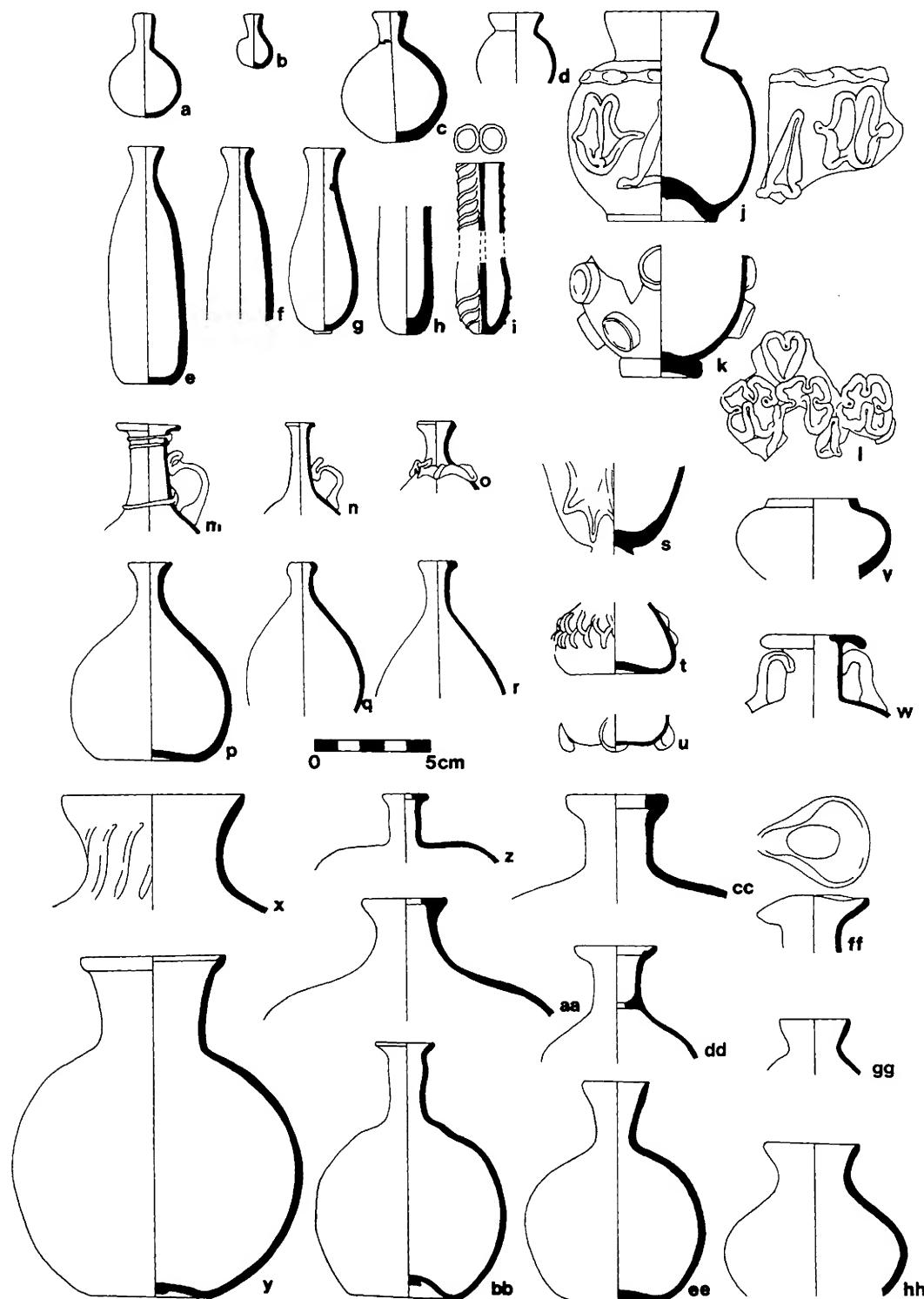
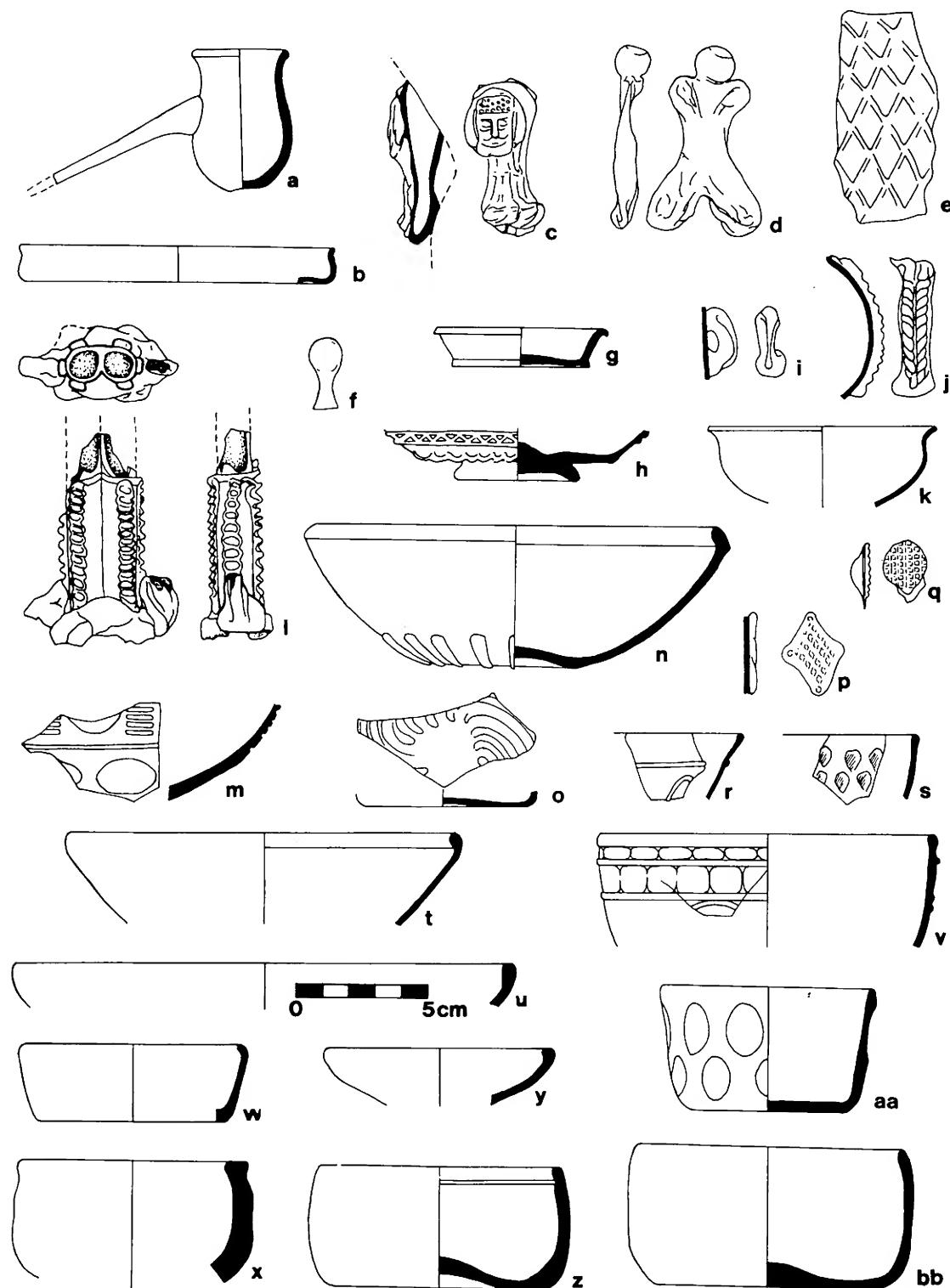


FIG. 59 Glass from the fortress

	Description	Location	Photograph no.	Accession no.
a	light green	E side room with seals	F189	34.107.69
b	greenish, clear			
c	yellow-brown	N side	F381.2	36.30.61
d	dark green	Hajji Ali Agha, E side of A	F186.1	34.107.67
e	green	Ali Askar, burnt room	F383.2	
f		Hajji Askar		
g	clear	Mirza Husein, B		
h	clear	top of fortress	F380.9	
i		A		
j	yellow, clear	top of fortress	F380.3	
k	clear			
l	light yellow-brown	Museiyib, center	F382	36.30.60
m	clear	Abbas Hashimi, room N side	F391.11	
n		Hajji Askar, center	F383.3	
o	clear	top of fortress	F391.9	
P				
q				
r	clear, blue-green threads	Museih, N	F380.4	
s	clear	Mirza Husein's holes	F380.7	
t	green, clear			
u	bright blue			
v				
w	green, clear			
x				
y	light yellow-green			
z	dark green	A	F185.2	
aa	clear(?)	top of fortress	F391.10	34.107.71
bb		on top middle	F185.1	

FIG. 59 Glass from the fortress



man, fourth to sixth century A.D.) or to the Byzantine (beginning in the ninth century), especially the late Byzantine (from the eleventh to twelfth century; Davidson 1952, 7-8). The Roman thus corresponds to the Parthian-Sasanian occupation at Qasr-i Abu Nasr, and the Byzantine to the Buyid and beginning of the Muzaffarid periods. Geographical distance and political dichotomy between the sites cannot be ignored, nor can this parallel be raised to offer definite explanations, although some ideas may be suggested. Extensive trade, cultural contact, and exchange took place between the Sasanian and Byzantine empires. In many ways their histories are parallel (e.g., in the problems with barbarian invasions), producing similar cultural inventories in response to similar incentives. In sum, one may see here what in the field of prehistory would be called an archaeological horizon, implying a uniformity in technological and social characteristics. This is not to say that these two sites are the same—the differences are manifest—but the similarities suggest the need, in dealing with portable minor objects, for broad and complex historical analysis of these humble artifacts.

First, the discussion must return briefly to the glass. Roman glass dating generally to the second century of our era is well represented at Corinth. While a few jar forms are held in common (Corinth 666, 659 parallel Fig. 58b, w; Fig. 58w is almost certainly a Roman import), most comparisons are in decorative features (641, 599, 600, 592 parallel Fig. 59e, n, s, v). Vessel shapes show clearly two separate traditions in glassmaking. Similarly the vessels from the western area at Qasr-i Abu Nasr, mostly Islamic in date, find parallels in decorative elements, all dating to the eleventh or twelfth century at Corinth (696, 811, 759 parallel Fig. 26i, j, r; and possibly one goblet form, 711, parallels Fig. 26n). Glassware is difficult to transport, but the similarity in decorative elements suggests that caravans did indeed trade such fragile objects between distant points.

Metalwork

Description of the metalwork may begin with larger artifacts made of iron found in the fortress at Qasr-i Abu Nasr (Fig. 60). Basic agricultural economy is reflected in tools, such as sickles (Fig. 60a-e), a

pruning hook (Fig. 60k), and a bronze object that appears to be a rake (Fig. 60f). Sickles have been found at Susa (1972b, 28.1) and Pasargadae (95.15). A pruning hook was found at Istakhr (56). Other tools include adzes (Fig. 60g, h) and a variety of bars and prods (Fig. 60i, j, m-o). The adzes are found at Istakhr (66), Nishapur (1982, 202, 203) and Corinth (actually axes; 1445, dated somewhat later). Several artifacts are parts of horse trappings: a horse-shoe (Fig. 60q), stirrup (Fig. 60x), and bit (Fig. 60y). Similar medieval horseshoes were found at Bastam (1979, 8.6, 14.17), Hama (1969, 22.2), and Corinth (903).

As might be expected in a fortress, numerous keys made of iron were found; these were made for tumbler locks (Fig. 60r-v). Both locks and keys of this type—usually in wood—were (and occasionally still are) used throughout the Middle East (Wulff 1966, 67-69). A part of a small padlock and a key were also found (Fig. 60, l, w; Tanavoli and Wertime 1976, 14), paralleled on Cyprus (J. du P. Taylor 1938, 36) and at Corinth (967, 1007). Keys were also found at Istakhr (80, 82). Two items may be considered furniture fittings—a ring with attachment (Corinth, 903 parallels Fig. 60p) and a hinge (906 parallels Fig. 60, l). Finally a sort of mortar board (Fig. 60z) has an equally mysterious parallel at Corinth (2897).

Metalwork has wide-ranging connections; in addition to comparisons with the West, parallels from Central Asia may be considered. The Sogdian region has received much archaeological attention, producing materials relevant to Sasanian archaeology. The study of the metalwork from Panjikent (Pandzhikent; 65 kilometers east of Samarkand) gives an indication of the possibilities for comparative study (Raspopova 1980; I am indebted to Prudence O. Harper for calling this material to my attention). The excavations at Panjikent revealed occupation from the fifth to eighth century (mostly seventh to eighth century; Azarpay 1983, 1145). The historical interconnection with Qasr-i Abu Nasr is more direct and likely than that with Corinth during this Sasanian and early Islamic period.

Panjikent has parallels for the sickles, adzes, bars and hinges, keys and locks, and the horse's bit (41 parallels Fig. 60a, d; 36.20, Fig. 60g, h; 85.4, 5, Fig. 60, l, m; 85.6, Fig. 60s; 85.2, Fig. 60w; 70.5,

Fig. 60y). Moreover, in contrast to those with Corinth, the parallels with this Sogdian site are often very close, almost exact duplications. This is also true for the second metalwork group (Fig. 61), which might be described as iron hardware and utensils, again mainly from the fortress. Numerous nails and fasteners were used on the site, ranging from a massive bolt (Fig. 61a) to small tacks; the tacks are classified according to the shape of the head (Fig. 61b, spherical; Fig. 61c–e, hemispherical; Fig. 61g, rectangular) or the section of the shaft (circular or square). In contrast the larger nails have round shafts with either round (Fig. 61h) or lanceolate (Fig. 61f, i) heads. Such nails have been found at Pasargadae (91.6 parallels Fig. 61b; 97.16, Fig. 61d), Istakhr (156, 155, 164, Fig. 61c, d, e), Qal'eh Dukhtar (1978, 41.6, Fig. 61d), Naqsh-i Rustam (1970, 30.9, Fig. 61f), and Susa (de Morgan 1905, 59, 58, Fig. 61e, f). Nails also occur at Corinth, as might be expected (1035, 1049, 1026, 1042, 1033 parallel Fig. 61a, c, d, e, h); this last type is also found at Hama (1969, 23.6 parallels Fig. 61h). The smaller nails or tacks were probably used with brackets or plates (e.g., Fig. 61r, paralleled at Corinth, 1057; Fig. 61, l, p, q; Fig. 61q is found at Istakhr, 70; Fig. 61p at Panjikent, 16.8). Iron latchhooks are also present at Qasr-i Abu Nasr (Fig. 61j, k).

Utensils include a bronze dipper (Fig. 61s) and bronze pestle (Fig. 61m); such pestles occur at many sites: Istakhr (60), Hama (1969, 16.3), Corinth (1442), and Panjikent (62.6). A bronze ladle was found in the western site (Fig. 61, o, very similar to one from Panjikent, 84), while iron ladles were found on the fortress (Fig. 61n, t; the former also at Istakhr and the latter at Yahya 1970, 6c, and Istakhr, 61). Finally, lengths of heavy iron chain were found in Cut 1 (Fig. 61u, like that of Corinth, 1455) and an enigmatic bronze object, triangular in section, perhaps an ingot or weight (called a "thunderbolt" by the excavators, Fig. 61v).

Sasanian metalwork is primarily recognized for its fine silver plates. Qasr-i Abu Nasr produced humbler vessels, but the fortress did yield a small undecorated silver bowl (Fig. 62t) in a form occurring at Pasargadae (97.1), Istakhr (13), Susa (1979a, 74.2), and Panjikent (83.2). More common were shallow plates or lids of bronze (Fig. 62a, b, found at Panjikent, 79.4, 5). One such plate, described both

as a lid and as a mirror, has a small handle in the form of a lion (Fig. 62f); this is discussed by Allan in reference to a lion figure from Nishapur (1982, 54, 188) and is closely paralleled to an excavated piece from Susa (1979a, 74.1) and another in a collection (Grabar 1967, 58). This is also reminiscent of Chinese mirrors of the T'ang period with the lion and grape motif, such as the one found at Susa (Ghirshman 1956b). Another lid is a heavy iron piece, similar to ceramic forms (Fig. 62h; cf. Fig. 53t; paralleled at Panjikent, 79.9). Other bowl forms include small bowls or crucibles often referred to as medicine droppers (Fig. 62c, d, e). Such crucibles are very common, with excavated examples from Istakhr (22–28), Susa (1972b, 28.4), and Qal'eh Yazdigird (1979, 8a), as well as Corinth (577, 580) and Panjikent (82.7, 8). Heavy, deep bowls were also found at Qasr-i Abu Nasr (Fig. 62g, i, j, s; Fig. 62g may be the neck of a large jar; cf. Corinth, 530). The flat, outcurving rim of one of these bowls (Fig. 62s) is paralleled at Istakhr (35), Corinth (532), and Panjikent (83.16). Most bowls have a thickened, incurving rim, such as the large bronze bowl (Panjikent, 80.3 parallels Fig. 62u); others are oval in shape, a common diagnostic form of Sasanian metalwork (Fig. 62v, y; the drawings show the end and side views, Frye 1973, 15). One of these "boat-shaped" bowls has a basket handle and is made of lead (Fig. 62y). Another was excavated from a Sasanian burial at Malyan (Balcer 1978, 9) and another from Istakhr.

A series of handles in the shape of a horse's hoof (Fig. 62k, l, m) was found, along with others in the form of an animal or a simple strap (Fig. 62, o, n; found at Corinth, 523, 566; Grabar 1967, 57). Such handles were presumably once attached to closed vessels, for which only fragments were found (Fig. 62p, q; the former possibly parallel to that found at Malamir by Stein 1940, 6.15). The turned element (Fig. 62p) is reminiscent of the segmented lampstand (Frye 1973, 16; also BMMA II, 36), a type quite common throughout the Middle East (e.g., Oren 1978, 86; Corinth, 863; Panjikent, 62.5, to name only a few of many examples). There was also a possible mortar (Fig. 62w, with a parallel at Istakhr) and an iron tubular form, possibly a furniture fitting (Fig. 62r). Finally there was a ring stand with three booted feet (Fig. 62aa, ill. in Frye

FIG. 60 Iron objects

	Location	Photograph no.	Accession no.
a	top of fortress	F350.3	
b		F350.4	
c			
d		F350.5	36.30.74
e	NW Front (Room 23, alcove)	A112.1	
f	Muhammad Husein, W. slope (bronze)	F224.1	34.107.84
g	by wall near fallen door jamb	A179 (?)	
h	Mirza Husein room, N side	F352	
i	top of fortress (75)	F354.1	
j	Husein Ali Agha, N of fire altar	F358.7	
k	floor of room with piers	F356.8	36.30.82
l	top of fortress	F358.8	
m	Haidar, N side room, copper ferrule	F358.9	
n	east end (13)	F353.5	36.30.75
o	top of fortress	F358.3	36.30.293
P			
q	top of fortress	F353.3	
r	top of fortress (near 74)	F349.1	36.30.79
s	top of fortress (39)	F349.2	
t	Hajji Riza, E end of Cut 1		36.30.80
u	top of fortress	F349.3	
v	top of fortress	F354.4	36.30.77
w	top of fortress (67)	F353.1	
x	top of fortress	F357.7	
y	Ali Masum Ali, Cut 1	F351	
z	Kerim	F353.4	
aa	Hajji Husein, A	F361.2	36.30.81

FIG. 60 Iron objects

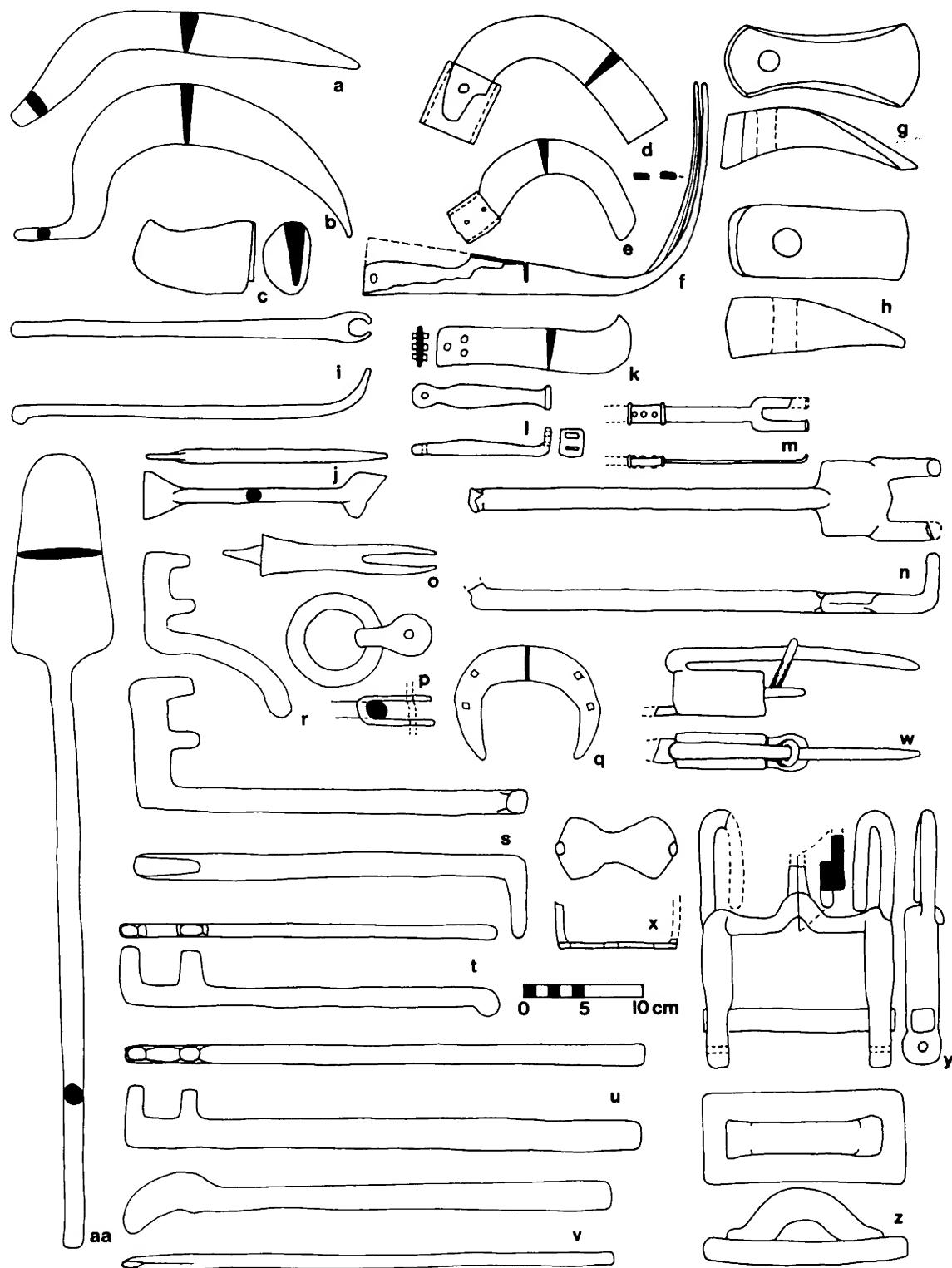


FIG. 61 Metal objects

	Description	Location	Photograph no.	Accession no.
a	iron	drain near plaster floor		
b	iron	top of fortress	F357.4	
c	iron	top of fortress		
d	iron	top of fortress	F357.3	
e	iron	top of fortress	F357.7	
f	iron	top of fortress	F357.5	
g	iron	top of fortress		
h	iron	top of fortress	F357.1	36.30.288
i	iron	top of fortress	F357.6	36.30.289
j	iron	top of fortress	F358.1	
k	iron	top of fortress, Husein Ali Agha	F358.2	36.30.292
l	iron	Abbas Hashimi, B	F357.10	
m	bronze	Rahim, N side	F371	
n	iron	A(?)	F354.3	36.30.76
o	bronze	Room 9, inside wall	A15,A111	33.175.55
p	iron	Museiyab, W end of Cut 1	F357.12	36.30.290
q	iron, holes corroded (?)	top of fortress	F357.13	
r	iron	top of fortress		
s	bronze	Abdullah, near armor	F222.6	34.107.82
t	iron	top of fortress	F354.5	
u	iron	Cut 1	F358.6	
v	bronze, triangular in section	Haidar, W slope	F224.2	

FIG. 61 Metal objects

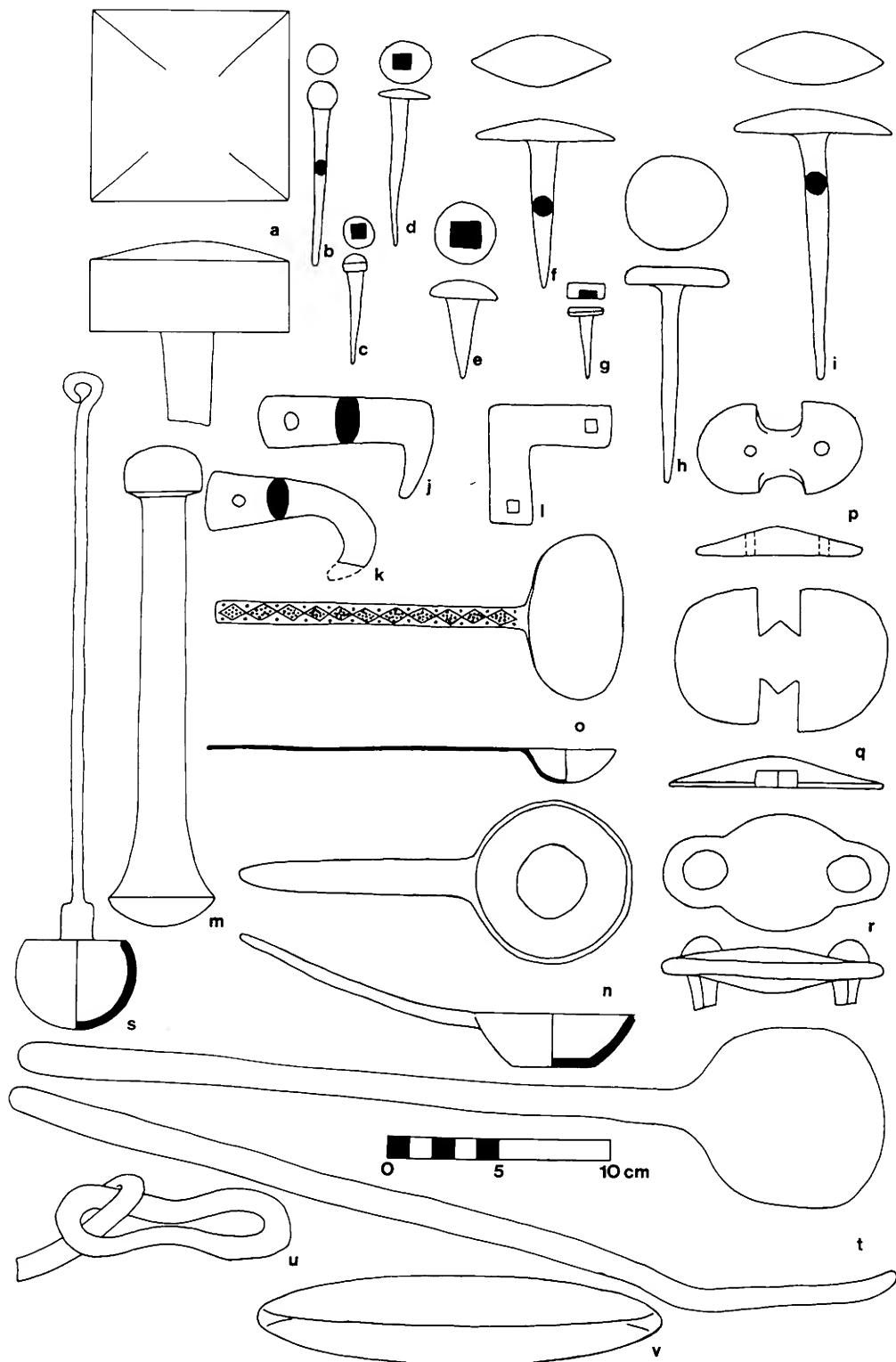
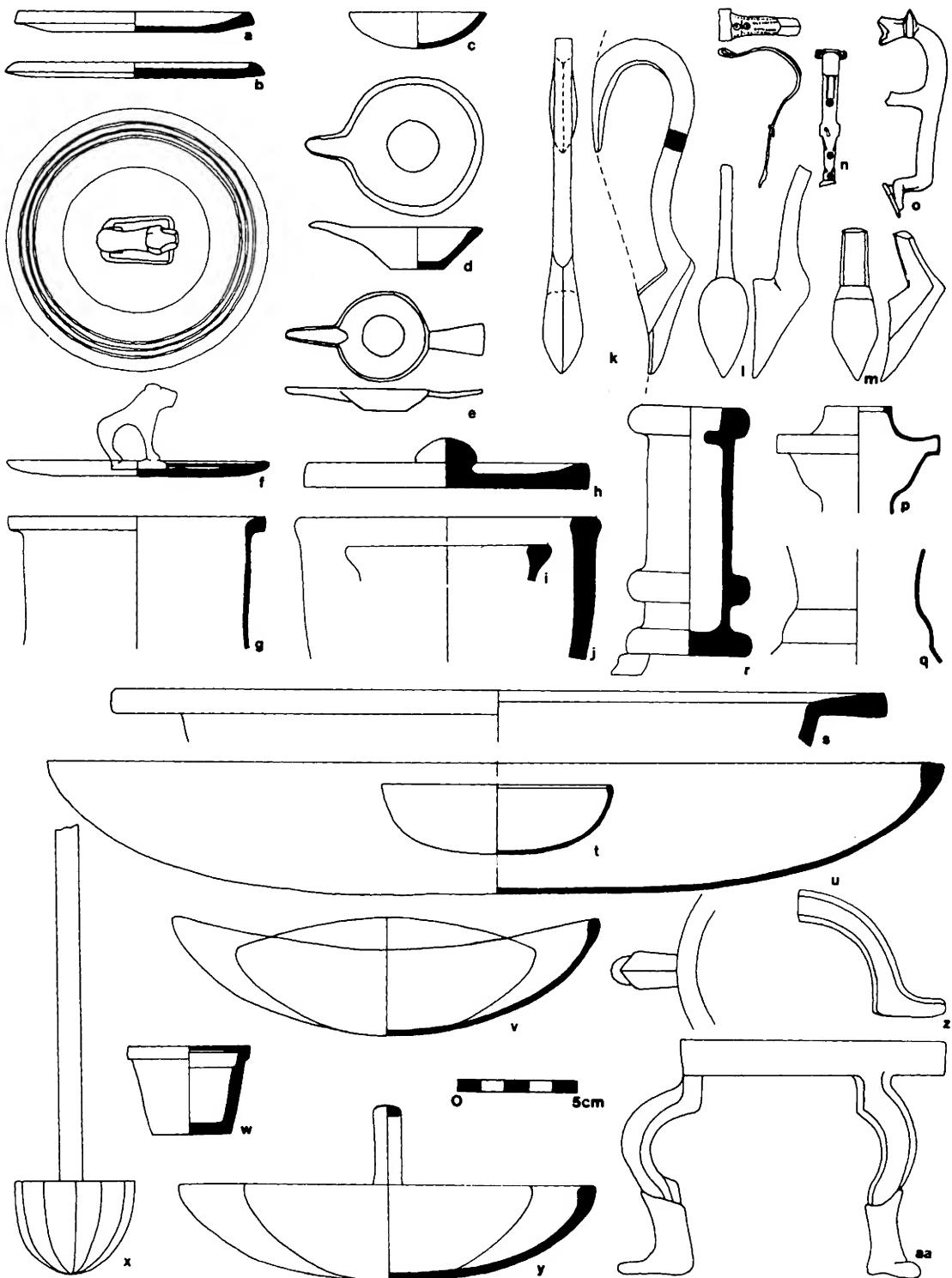


FIG. 62 Metal objects

	Description	Location	Photograph no.	Accession no.
a	bronze	Askar Ali room		
b	bronze	Askar Ali room		
c	iron	Hajji Ali Agha, E slope		
d	lead	Kerim, N side		
e	copper	Ali Masum Ali, W end of Cut 1	F226.1	34.107.87
f	bronze	Hajji Husein, N side	F516,517	36.30.10
g	bronze	Askar Ali room		
h	iron	Ali Askar's burnt room	F374.2	
i	bronze	Askar Ali room		
j	bronze	Askar Ali room		
k	bronze	Hajji Husein, room N side	F519.2	
l		Askar Ali room	F370.1	
m		Askar Ali room	F370.2	
n	copper		F528.1,2	
o	copper	Arab, N slope, room 21		34.107.86
p	brass (?)	Museiyib, Cut 3 deep	F519.3	
q	copper	Askar Ali room		
r	iron	Room 23, annex	A201, A30	
s	bronze	Ali Askar room		
t	silver		F176	34.107.74
u	bronze	Hajji Ali Agha, W slope near SW corner of Central House	F223	34.107.83
v	bronze	Muhammad Husein, NE corner	F520	
w	bronze	Ali Askar's burnt room	F359	
x	bronze tip, iron shaft	Ali Askar's burnt room	F521	
y	lead	Ziyad, N corner room, over tower		
z	bronze	Ali Askar's burnt room	F370.5	
aa	bronze	Ali Askar's burnt room	F76,178	

FIG. 62 Metal objects



1973, 15) and another foot (Fig. 62z); such ring stands are known from collections (A. Godard 1931, 218; Moorey 1971, 518) and from Corinth (feet only, 842) and Panjikent (81).

A number of furniture feet (Fig. 62x) were found in one locus, Ali Askar's burnt room. The following inventory is found for this room on various field notes: "Four bronze feet (?), embedded iron core, plus a great quantity of melted bronze rods. Also a mass of burned iron straps, pieces of chain and rods—possibly pieces of wooden furniture braced or ornamented with iron and with the above as feet." The room also contained "burnt almonds and carbonized figs, many pieces of burnt glass (parts of bottles and bowls; Figs. 58p, 59e) and quantities of cylindrical glass beads," as well as a stone tray and pestle (Figs. 67j, 68k). The room is best known for the numerous clay sealings published in Frye 1973 (see Appendix A: 4, of sealing locations). This by no means completes the inventory of this room; a large number of vessels (Fig. 62) were also found here (there is some confusion in the names Ali Askar and Askar Ali, but no pickman by the latter name is otherwise known). Ali Askar's burnt room was Locus 8 (see Fig. 29), an extension of Cut 1 in the northeast corner of the fortress. A second burnt room was Locus 3 in Area B, south of the Central House and associated with Ismail (Upton 1973, 15, 18, figs. 12, 13). Apparently no formal inventory was made of the numerous sealings or other artifacts from these burnt rooms, hindering any functional interpretation of this potentially interesting association.

Much of the metalwork was of a more militaristic nature, consisting mainly of knives and metal tips of spears, lances, and arrows. A variety of metal points, indicative of diverse chronological, and perhaps cultural, associations was found. Relatively few larger points were found. They usually had tanged hafting; one example with socketed hafting was found (Fig. 63a-e; found at Naqsh-i Rustam 1970, 30.1, Fig. 63b, also at Hama 1969, 21.4; Fig. 63c, at Istakhr, 73; Fig. 63e at Qal'eh Dukhtar 1978, 42.5). Smaller arrow points may be divided into the following typological categories (Type A is made of iron; Types B-H usually are made of bronze):

A) Flat, lanceolate points, sometimes with a slight ridge and a tang (Fig. 63f-l; Fig. 63f, j, l found also

at Persepolis 1957, 76.21, 4,22; Fig. 63g, i at Naqsh-i Rustam 1970, 30.5, 4; Fig. 63, l at Pasargadae, 105.13; and Fig. 63k at Bastam 1972, 49.6; at Bisitun 1970, 23.1; Hama 1969, 18.10).

B) Flat points with somewhat barbed sides and a tang (Fig. 63q, r; paralleled in Moorey 1971, 17).

C) Flat points with a pronounced central ridge and tang (Fig. 63u, v; the latter at Tureng Tepe [Deshayes 1973, 3d]).

D) Flat points with a socket type of hafting (Fig. 63s, t; Fig. 63s found at Persepolis 1957, 76.1, 19, and Pasargadae, 95.2). Cleuziou dates this type to the sixth to third century B.C. (1977, E12).

E) Triangular points with a socket (Fig. 63bb, cc, dd; these are found at a great number of sites, Pasargadae, 94; Persepolis 1957, 76.2, 3; Istakhr, 166; Susa 1972b, 44.4; 1979, 36.4; Yahya 1970, 7J; and even Corinth, 1518, 1521).

F) Triangular points with a tang (Fig. 63w-aa; Fig. 63w, y found at Qal'eh Dukhtar 1978, 5b, c; Fig. 63y at Naqsh-i Rustam 1970, 30.2; Fig. 63z at Yahya 1970, 6D; Susa 1943, 56.4; and many other places; Fig. 63y, z, aa at Panjikent, 44). These are usually made of iron.

G) Solid points with a round section, made of bronze (Fig. 63m, n; the latter found also at Bastam 1972, 49.2).

H) Solid points with a square section made of iron (Fig. 63, o, p; found at Naqsh-i Rustam 1970, 30.3; Istakhr, 167; Susa 1943, 56.5; Bastam 1972, 49.8-11, 1979, 5.9-18; Bisitun 1970, 22.2, 23.3, 4; Hama 1969, 18.11; and Panjikent, 47).

Almost as numerous as Qasr-i Abu Nasr were the small knives (or razors), which may be classified according to size and position of the hafting tang. Smaller knives have either a central tang (Fig. 63ii-kk; found at Pasargadae, 95.12; Hama 1969, 23.2), a tang extending from the back (Fig. 63nn, oo; found at Susa 1943, 56.3; Bastam 1972, 50.1; Corinth, 1571; Panjikent, 40.19), or a central tang with a hafting ring and concave cutting edge (Fig. 63, ll, mm; the former at Panjikent, 16.4, 41, and the latter at Hama 1969, 22.8-10). The somewhat larger blades have either a central tang, hafting ring, and straight cutting edge (Fig. 63pp, ss, tt; found at Susa 1943; 56.6, and Yahya 1970, 6A) or a tang extending from the convex cutting edge (Fig. 63qq, rr,

uu; the first found at Istakhr, 68, and the last from Pasargadae, 95.14). All of these small knives appear to have been made of iron and would have been fitted into handles such as those illustrated here, especially that made of bone (Fig. 63ff, gg, hh; found at Hama 1969, 44.2; Corinth, 1413).

Finally a section of scales from armor was found in situ (Loci 9, 10, apparently). Each scale has seven attachment holes; the arrangement shows that thirteen iron scales were alternated with a single scale made of bronze (Fig. 63ee; scales have been found at a number of sites, but none in this precise pattern, e.g., Pasargadae, 96.6; Panjikent, 53.1).

A more miscellaneous collection of small metal pieces comprises the next group (Fig. 64). Among these are a series of buckles and attachments (Fig. 64a-c, e-h, n); similar buckles have been found at Istakhr (Fig. 64a-c) and at Ctesiphon (1933, 51 parallels Fig. 64a; 1934, 6A, Fig. 64b; 1933, 52, Fig. 64c); an exceptionally close parallel is from the Sasanian grave at Malyan (1978, 2b parallels Fig. 64h). Buckles were found at Corinth (pl. 114) and Panjikent (65 parallels Fig. 64e; 63.3, Fig. 64f; 66.2, Fig. 64h). Hooks are found in a number of sites (Fig. 64v is paralleled at Malyan 1978, 2f; Qal'eh Dukhtar 1976, 46.2; Bisitun, 23.6; Takht-i Sulaiman 1965, 68; Panjikent, 48.2). A heavier buckle (Fig. 64x) has no close parallels but is similar to objects from Hama (1969, 32.6) and Yahya (1970, 8B). Such buckles appear in Ghirshman's study (1979, pls. 5.3, 6.4 parallel Fig. 64b, f).

A number of small pendants (more properly belonging to the jewelry, Fig. 66) have the form of animals (Fig. 64i-k, m, o; Fig. 64j is found at Istakhr, 206, Naqsh-i Rustam 1970, 28.10; Panjikent, 78.3; and Fig. 65k at Corinth, 499). One is crescent-shaped (Fig. 64, l; see below, Fig. 70a-g, and gold jewelry, pls. 51, 52). A larger pendant (Fig. 64z) has a close parallel at Istakhr, and a fibula with the pin broken off (Fig. 64,o) has a parallel at Susa (1943, 59.5) and is shown by Ghirshman (1977, 1.4). Other objects include hooks for weighing (Bastam 1979, 15.14 parallels Fig. 64r), fishing hooks (Fig. 64y), weights (Fig. 64aa, bb, both made of iron and one filled with lead; Corinth, 1619-32). There is also an inscribed Byzantine weight (Fig. 64d, unfortunately broken) with the symbols for one ounce (Γ·Α) and the word XAPIC (grace, favor; Cor-

inth, 1587). There are possible handles (Fig. 64u, cc, the former made of lead, the latter paralleled at Nishapur 1982, 162; Istakhr; Corinth, 910). Finally there is a metal seal (Fig. 64p, ill. in Harper 1973, 31; paralleled by Corinth seals, 2677-85; and somewhat similar to one from Qal'eh Dukhtar 1976, 47.1-2).

A number of pins, made of bronze, were found on the site of Qasr-i Abu Nasr. Smaller pins with a hole near the head include needles, awls and fibulae (Fig. 65a-e; Fig. 65a is found at Qal'eh Dukhtar 1978, 42.6; Pasargadae, 91.10; Corinth, pl. 78; among other places; Fig. 65b at Naqsh-i Rustam 1970, 30.10; and Fig. 65e at Corinth, 1377). One fibula made of silver (Fig. 65z), belongs to a well-known earlier tradition, here perhaps Achaemenid (Moorey 1971, 222). Pins with figural heads (usually birds) are commonly described as cosmetic (kohl) pins (Fig. 65m-o; found at Istakhr, 93, Nishapur 1982, 68, 69; Hama 1969, 28.4; Corinth, 2355). Other pins have round, flattened heads (often called cochlear; Fig. 65q-u; Fig. 65q found at Naqsh-i Rustam 1970, 30.11; Susa 1972b, 28.2; Hama 1969, 26.8; Fig. 65r at Hama 1969, 25.10; Corinth, 1349; Panjikent, 86.5; Fig. 65s at Susa 1972b, 28.3; Yahya, 7H; Fig. 65t at Pasargadae, 91.11; Fig. 65u at Susa 1979a, 74.4; Istakhr, 79; Corinth, 1322). Other pins have nonfigural heads (Fig. 65v-y; Fig. 65v found at Taxila, Marshall 1916, 24c; Fig. 65x at Istakhr, 98; Panjikent, 31.12; Fig. 65y at Istakhr, 87; Nishapur 1982, 84; Hama 1969, 24.7).

Among the implements from the site are several forks and spoons, all made of bronze (Fig. 65f-j), including a fork and spoon set, each terminating in a fine horse's head, and a curious combination fork and spoon (Fig. 65g; such an implement was found at Susa 1943, 62.1). Other examples are from Istakhr, 106; Taxila, Marshall 1916, 201; Yahya 1970, 7A; Nishapur 1982, 117; Hama 1969, 28.8; Corinth, 1377, 1382, 1392, among the many Byzantine examples known. Other implements are tongs (Fig. 65k, l, also at Corinth, 1459) and tweezers, all made from iron (Fig. 65kk-nn at Nishapur 1982, 88; Corinth, 1465). Several types of bells were found, ranging from small round bells (with a pellet inside, Fig. 65aa-ee; found also at Istakhr, 179; Bastam 1972, 53.7; Nishapur 1982, 88; Hama 1969, 21.6; Corinth, 2112-14; Panjikent, 78.17) to small bells

FIG. 63 Arrowheads and knives

	Description	Location	Photograph no.	Accession no.
a				
b	bronze(?)	Jaafar, S of mud tower	F373.2	36.30.73
c	iron	Rahim, E side low	F523.3	
d	iron		F355.1	
e	iron	enclosure wall	A175	34.107.152
f				34.107.155
g				
h	bronze			34.107.149
i	bronze			34.107.156
j	bronze	Room 21	A112	
k	bronze			34.107.147
l	bronze	Ziyad		
m				
n	iron	Ziyaad, center top		
o	iron		F355.13	
p	iron	Room 20	A112	
q	bronze			34.107.146
r	bronze			34.107.148
s	bronze	NW Front	A112	34.107.151
t	bronze(?)			34.107.150
u	bronze			
v				
w	iron		F355.2	36.30.282
x				
y				
z				
aa	iron		F355.7	
bb	bronze			34.107.154
cc	bronze	Ziyad		
dd	iron			34.107.153
ee	iron (13 scales) and bronze (1 spacer)		F522	36.30.295
ff	bone, incised	Rahim, room N (near 77)	F546.3	36.30.84
gg	copper	top of fortress	F528.5	
hh	bronze	Haidar, room N side	F528.4	
ii				
jj	iron		F356.1	
kk	iron		F356.5	36.30.286
ll				
mm	iron		F356.4	36.30.285
nn	iron	(10)	F356.7	36.30.287
oo	iron		F356.3	
pp	iron, copper ferrule			
qq		Room 21 burnt	A112	
rr		N Hump	A11, 112	
ss	iron	Rahim		
tt	iron	Abbas Hashimi, N side	F356.9	
uu	iron	Muhammad Husein, NE corner	F356.10	

FIG. 63 Arrowheads and knives

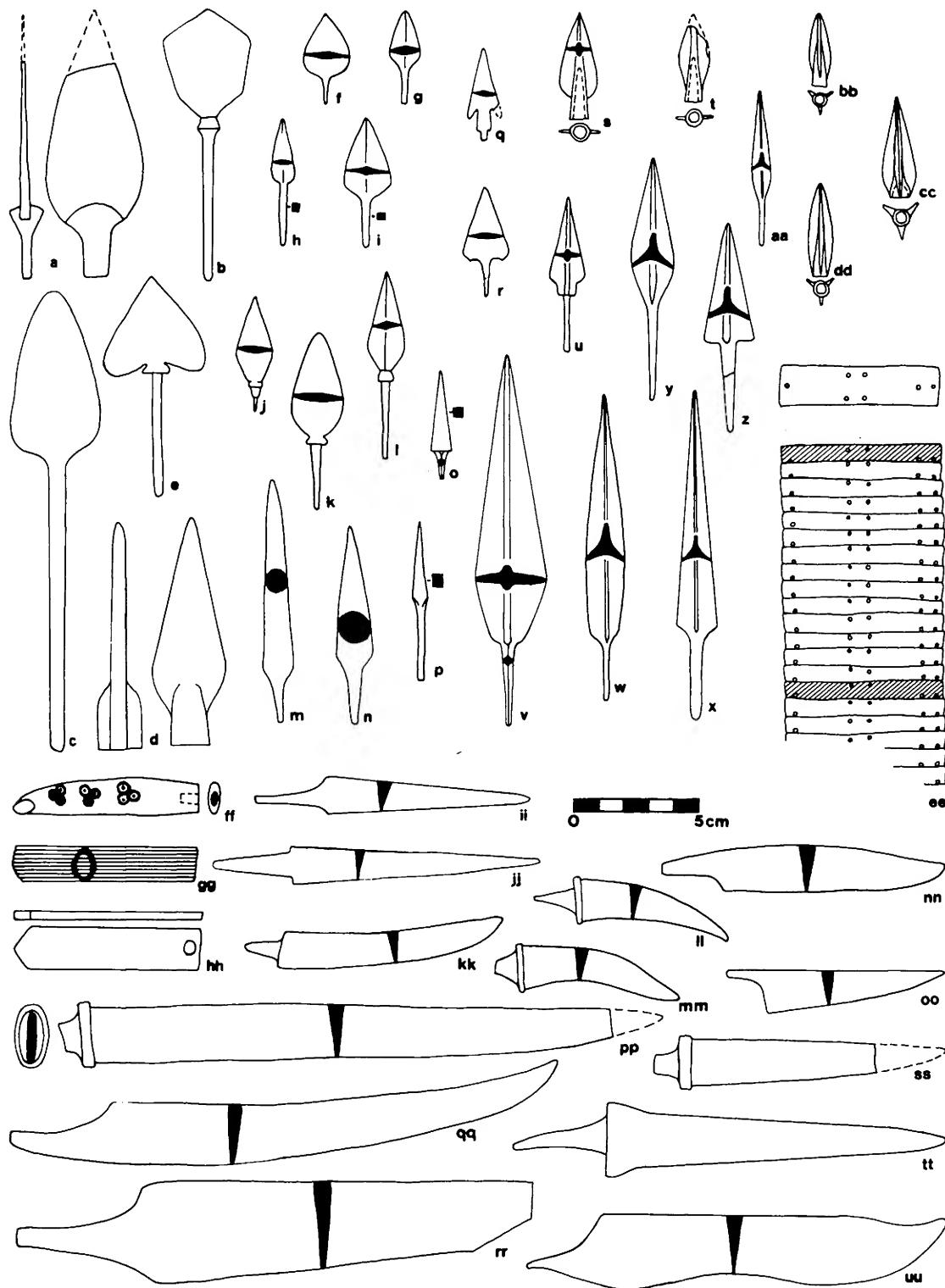


FIG. 64 Small metal objects

	Description	Location	Photograph no.	Accession no.
a	bronze	Hajji Ali Agha, W slope	F247.5	
b	bronze	E slope dump	F527.10	
c		Museiyib room, N side (near 13)	F247.7	34.107.75
d	3 bronze fused plates	Museiyib	F524.1	
e	bronze	Museiyib	F527.7	
f	bronze	Museiyib, Central House floor	F247.3	34.107.106
g	iron	Ali Askar, Cut 4	F246.3	
h			F247.4	
i	bronze	Ali Hashimi, B	F225.1	
j	bronze	Kerim, N side enclosure wall	F527.5	
k	bronze	Arab, N slope	F225.3	
l	bronze, originally gilded		F527.6	
m	bronze		F365	
n		Ibrahim, E end of Cut 1	F247.1	
o		A	F246.5	
p	bronze	Mirza Husein (66)	F365,524.2	
q	bronze		F365	
r	iron	Safar room, N side	F358	36.30.291
s	iron	Cut 1		
t	lead		F365	
u	lead handle		F367	
v	bronze	Hajji Askar	F527.3	
w	bronze		F365	
x	copper	Kakakhan, W end of Cut 1	F247.6	
y	copper	Ali Askar, W slope	F527.2	
z	bronze	Abdullah, A	F246.4	34.107.105
aa	bronze weight filled with lead			
bb	lead			
cc	bronze	N10	A111	33.175.54

FIG. 64 Small metal objects

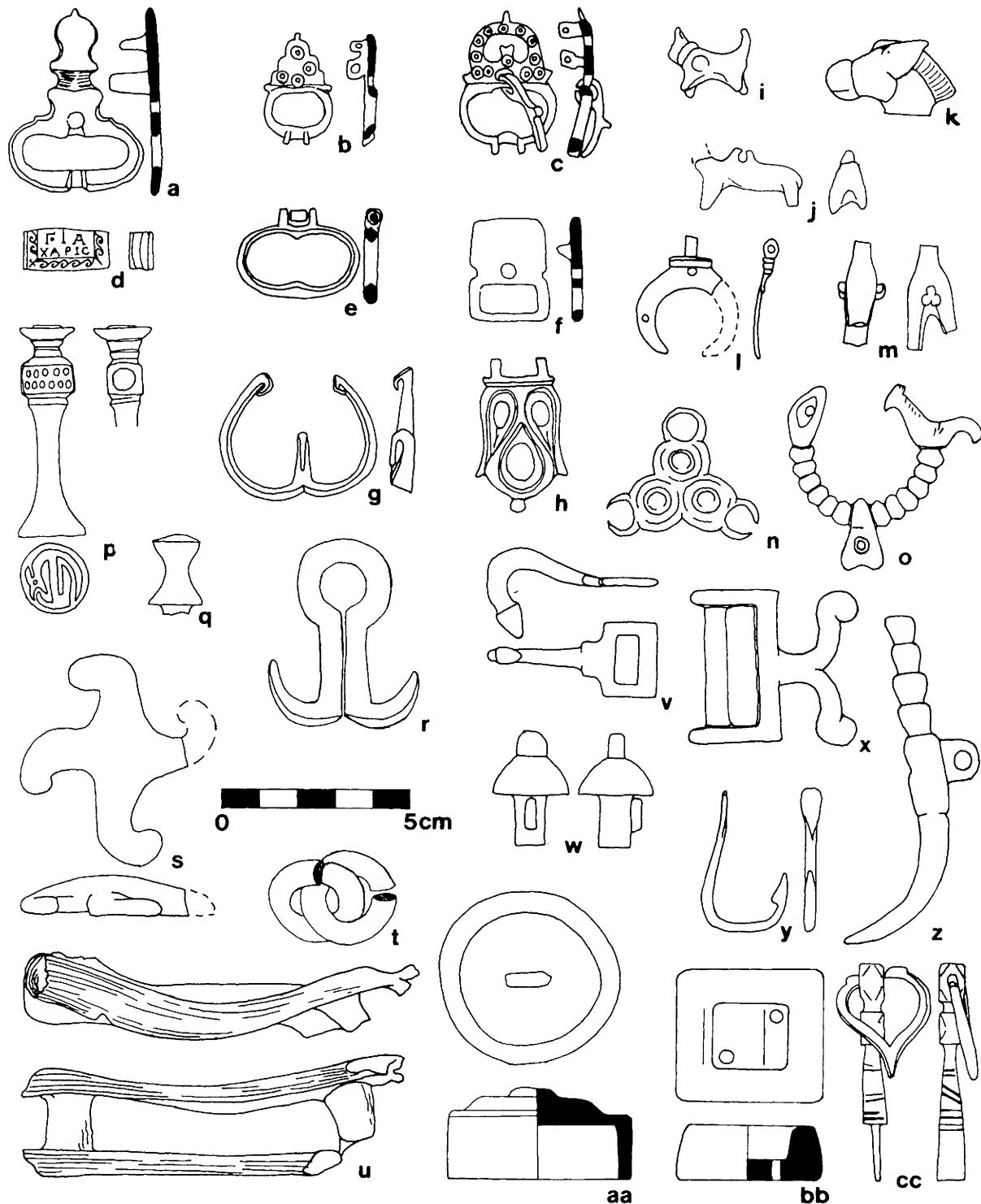
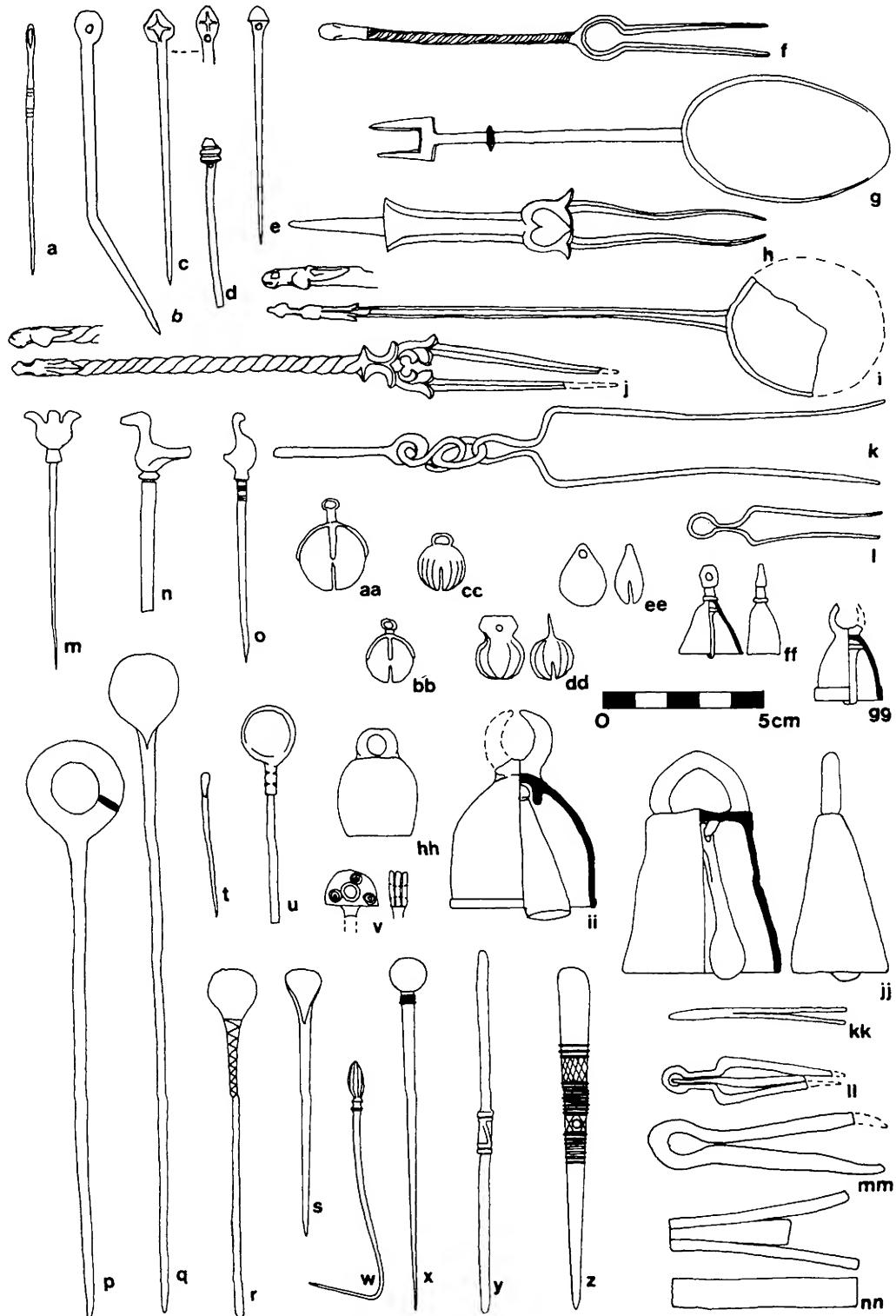


FIG. 65 Metal implements and bells

	Description	Location	Photograph no.	Accession no.
a			F192.1	
b		Askar Ali room	F192	
c		Askar Ali room	F525.3	
d	copper	Ziyad, W slope	F525.6	
e	copper	Abbas Isa (13)	F192.7	34.107.140
f	copper	Museiyib, room N side	F221.3	34.107.77
g	copper	Ali Hashimi, street corner	F222.5	
h	copper	Safar, Cut 2	F221.4	34.107.78
i		A	F222.2	34.107.80
j		Akbar, room NE side	F221.5	34.107.79
k	copper	Ali Hashimi, N of fire altar	F372	
l		Ali Askar, Cut 1, middle		
m	copper	Ali Hashimi, B	F192.4	34.107.138
n	bronze		F192.11	
o	copper	Cut 4	F192.3	
p	copper	well near village		36.30.72
q	copper	Hajji Askar, room E center	F525.7	36.30.78
r	copper	Barfi, E side	F525.5	
s	lead	Cut 1	F193.1	34.107.145
t	lead	top of fortress	F192	
u	bronze	N1	A11, 111	33.175.56
v	bronze		F365	
w	brass		F525.1	
x	copper	(10)	F193.5	
y	bronze	N8	A11, 111	33.175.58
z	silver	Cut 1	F193	34.107.144
aa			F368.12	
bb	copper		F368.2	
cc			F368.1	
dd	copper	Museiyib	F368.6	
ee			F368.3	
ff	copper	Mirza Husein (?), B	F368.4	
gg			F368.10	
hh			F368.15	
ii	bronze, iron clapper	Rahim, wall farthest E of center	F519.1	36.30.83
jj	iron	Hajji Ali Agha, pier room	F368.17	
kk			F526.2	
ll	iron		F523.1	
mm	iron	Husein Ali Agha		
nn	iron (?)		A11, 112	

FIG. 65 Metal implements and bells



with clappers (Fig. 65ff–hh; found at Istakhr, 170, 172, 179; Pasargadae, 93.3, 4; Hama 1969, 31.23, 32.8; and Corinth, 1640) and larger bells (Fig. 65ii, jj; the former made of bronze, with an iron clapper, and the latter entirely of iron).

The presentation of the metalwork concludes with an account of the jewelry found on the fortress. This jewelry is mainly made of bronze; a limited number of small gold artifacts were found, usually earrings and pendants with the addition of pearls and fine granulation (these are known only from photographs, pls. 51, 52). Earrings usually appear to have originally had pearls and other pendants attached (Fig. 66a–e; found also at Istakhr, 194; Qal'eh Dukhtar 1978, 13, 14; Pasargadae, 105.24; Yahya 1970, 7D; Mahuz 1970–71, 29; Panjikent, 75.1). Pendants are often small lanceolate forms, one with a turquoise inlay (Fig. 66f, g; Pasargadae, 105.17; Corinth, 2118), or more elaborate forms (Fig. 66h, made of gilded bronze). Larger pendants have more specialized forms; the three examples shown here are a cross (Fig. 66q; naturally paralleled at Corinth, pl. 110, 1507), a figure of a Bes head (Fig. 66r; Pasargadae, 86.1; Corinth, 510, 511; see Ghirshman 1956a, 130, for a discussion of this form in Iranian art), and an amulet case (Fig. 66x; one example of many is from Mahuz 1970–71, 36).

A few types of chains were recorded, including fine wire rosettes strung along wires, pairs of circular links, and so-called Figure 8 links (Fig. 66i, j, k; Fig. 66k has been found at Corinth, 858; Istakhr, 196). Finger rings may be divided into two broad categories; thin rings with either a bezel or incised symbol (Fig. 66, 1–p; cf. Harper 1973, 37–41, for other examples and discussion; such rings are widespread in their occurrences, such as at Naqsh-i Rustam 1970, 28.8, 9; Corinth, pls. 102–7; Panjikent, 76, 77) and heavier iron rings (Fig. 66t–w; again at Naqsh-i Rustam 1970, 28.7; Yahya 1970, 7B; Panjikent, 76.15). An unusual form (Fig. 66s) is paralleled at Corinth, 1988. Bracelets are either complete circles or have a break, sometimes with a fastening (Fig. 66y, z, aa, cc–ee; Fig. 66, ll is made of iron and may not be a bracelet). Plain bracelets often have a thickened area, opposite the opening (if present). Others are twisted (Fig. 66y is incised to imitate twisting marks; Fig. 66z has a second wire wrapped around the core; Fig. 66aa is

found at Istakhr, 197; and other types at many sites including Susa 1972b, 36.7; Corinth, pl. 112; Panjikent, 74.9–11). This latter form of twisted bracelet is paralleled in the fragments of glass bracelets found on the site (pl. 46). Glass bracelets appear to have been found only in the western area and may be Islamic in date (an earlier date is not impossible); such glass is found on many sites and Stein reports its occurrence along the Iranian coast (1937). Distribution of glass bracelets and their use in archaeological study is considered for the Islamic period in Whitcomb (1983). Finally there are small buttons, bosses and guards made of metal (Fig. 66bb, ff–kk; Pasargadae, 96.11; Istakhr, 171, 173).

Stone

The worked stone artifacts are divided into vessels (Fig. 67) and other artifacts (Fig. 68). The stone employed has not been analyzed, since most of the objects were left in Iran. The description follows the field designation, which is at times confusing. Local limestone, for example, may vary from a yellowish white to a dark gray and the distinction between yellow limestone and alabaster is not always clear. Most of the examples appear to come from the fortress.

Two pieces of carved black stone were found with elaborate Sasanian floral motifs on a shallow, square cosmetic dish (Fig. 67a, b). This form was probably similar to that of a dish (Fig. 67h) with five containers, made of white limestone. The black stone may be similar to the so-called steatite (chlorite, soap-stone) used for a small jar (Fig. 67c), a thin jar neck with geometric carving (Fig. 67g), and a polished bowl (Fig. 67k). Dark gray limestone was also used for Achaemenid artifacts, such as the stone mortar and carved plaque (Fig. 11a, e). Two lids, one in a dark gray stone (Fig. 67n) and another in fine agate, oval in form (Fig. 67e), were found. The small fragment of an alabaster dish (Fig. 67i) was probably oval with straight long sides.

Alabaster was also used for two fragments of vessel bases (Fig. 67, l, m; Fig. 67m, with exterior, vertical fluting is paralleled at Corinth, 831). A number of stone bowls (or dishes) were found (Fig. 67, o–s), several of which are made of unusual stone and have an external ridge below the rim (Fig. 67p is made of

jasper and paralleled at Susa 1979b, 34.23; Fig. 67q is agate; Fig. 67r is a mottled green stone, recalling stone vessels at Persepolis 1957, 59.8, 10). The black stone reappears as a square dish (or tray, Fig. 67j, as at Corinth, 834), a large bowl (Fig. 67t at Corinth, 822), and a heavy bowl with three feet (Fig. 67w; found at Susa 1979b, 34.24; Persepolis 1957, 80.10). Less certain pieces are the limestone lid (or base of a hand mill; Fig. 67u) and heavy jar (Fig. 67v).

Other stone artifacts include small maceheads (Fig. 68a, b, j; possibly picked up from earlier sites, the last apparently belonging to the Jemdet Nasr period, Le Brun 1978, 39.1-9), stone pestles (Fig. 68c, k-n; Naqsh-i Rustam 1970, 30.14; Fig. 68l comes from the western area and could be a small finial, like Fig. 9a), a series of whetstones (Fig. 68d-i, and possibly Fig. 68, o; paralleled at Pasargadae, 101.5, 6, 104.9, pl. 169a; Naqsh-i Rustam 1970, 30.13) and objects that are probably weights (Fig. 68p-s; a number of these have cord marks, as the example from Siraf 1968, 7c). Two other limestone objects were possibly lids (Fig. 68u, v; found at Naqsh-i Rustam 1970, 30.20; and similar to Corinth, 1279, 1280). Perhaps equally uncertain is the black stone "rolling pin" (indeed, it bears a resemblance to a mano), which may have been a weight (Fig. 68t).

The heavier stone objects are almost entirely limestone. A stone bowl with two handles and exterior tooling marks (Fig. 68w) is similar to the numerous deep mortars found on the site (Fig. 68bb-ee; a close parallel is from Qal'eh Dukhtar 1976, 46.1; and many other sites). Two shallow grinding stones were also used on this site (Fig. 68x, y). The limestone table with three large legs (Fig. 68aa, found at Siraf 1969, 5d) is also known, from the field notes, in ceramic examples. Finally a small stone column base was found near the second defense below the fortress (Fig. 68z, wrongly identified as an "altar" in Frye 1973, 26; other examples at Pasargadae, 126; and Persepolis).

A wide range of beads was found at Qasr-i Abu Nasr, but the precise find location was rarely recorded. One of the most attractive types is made of stone, usually carnelian or agate, with an incised pattern filled with a white paste (Fig. 69a-c, f; a possible parallel exists from Corinth, 2451). Otherwise

agates appear as barrel-shaped beads, either smooth or faceted (Fig. 69g, h; Fig. 69g was also found at Pasargadae, 102.18; Yahya 1970, 8H; Corinth, 2404). The technique of faceting occurs on a crystal bead (Fig. 69d) and that of incising on an ivory bead (Fig. 69e). Plain beads are made of ivory, green stone, white and black stone (Fig. 69w-z, ee, hh), and of rarer materials, such as mother-of-pearl, bitumen, amber, and rolled lead (Fig. 69i, ff, gg, ii). Beads made of blue frit were also found (Fig. 69v; Yahya 1970, 8A; Corinth, 2418).

Black stone beads have figural decorations, suggesting that these should be classified with seals (Fig. 69u, aa, ill. in Harper 1973, 23, 24). Such decoration also occurs on a rectangular bead made of glass (Fig. 69dd); the form also occurs in steatite and ceramic (Fig. 69bb, cc). Glass beads are generally spherical with a variety of decorative elements and techniques. A wide range of colors was employed, most frequently white, red, yellow, dark blue, and green. A number of beads have circular elements and "eyes" (Fig. 69j, p, q, t, the last said to be stone). Several larger beads use a millefiori technique (Fig. 69r, s); otherwise an additive technique of colored bands was employed (Fig. 69k-o; similar beads of glass are widely known, e.g., at Corinth, 2431, 2432, 2444, 2457).

The bead forms continue with flat beads, again mainly agates and carnelians, but some of glass (Fig. 70h-n; Fig. 70k is found at Corinth, 2390). One bead, a spacer, is made of lapis lazuli (Fig. 70p). Pendant beads are also made of these stones, as well as of green stone, crystal and ivory (Fig. 70, o, q-s, y-aa; the first paralleled at Yahya 1970, 8G). One of the more popular forms of pendants was that of the crescent, again made of stone, glass, mother-of-pearl and ivory, the latter two with incised circles (Fig. 70a-g). Finally a number of beads were made from cowries and other shells, one of which was found on a wire ring with a carnelian and green stone bead (Fig. 70t-x; also from Yahya 1970, 8H).

A large number of buttons and whorls made of ceramic, stone, or bone were found at Qasr-i Abu Nasr. Small buttons, decorated with cut rings and generally conical in form, were found in all three materials (Fig. 71a-h; Fig. 71g, Hama 1969, 45.16). These may be related to red ceramic buttons, somewhat flatter (Fig. 71i, j, Pasargadae, 104.1),

FIG. 66 Metal jewelry

	Description	Location	Photograph no.	Accession no.
a	copper	Hajji Askar, E		
b	copper	Ali Agha, room near E end of Cut 1	F533	
c	copper	E end of Cut 1		
d	copper	dump of Cut 4		
e	copper			
f	copper			
g	brass, turquoise inlay		F527.8	
h	bronze, gilded	well near village	F606.1	
i	copper	Jaafar, near fallen lintel		
j	copper			
k	copper		F527.1	
l	silver	Kerim, N side	F539.2	
m	copper			
n	copper			
o	copper			
p	iron		F363	
q	bronze		F246.1	
r	bronze	Husein Ali Agha, N of fire altar	F170	34.107.72
s	copper	E slope dump	F539.5	36.30.71
t	iron		F363	
u	iron		F363	
v	iron		F363	36.30.66
w	iron		F363	
x	copper	Museih	F365	
y	brass (?)		F362	
z	copper	Mirza Husein, E end of Cut 1	F362.8	36.30.69
aa	copper		F362	
bb	brass (?)		F527.9	
cc	bronze		F362	
dd	copper		F362	36.30.68
ee	bronze		F362	
ff	bronze, with agate			
gg	copper, filled with wood			
hh	copper, filled with iron			
ii	silver	Kerim, N side	F364	
jj	bronze	Haidar, room N slope	F364	
kk	copper	Haidar, room N side	F364	
ll	iron			

FIG. 66 Metal jewelry

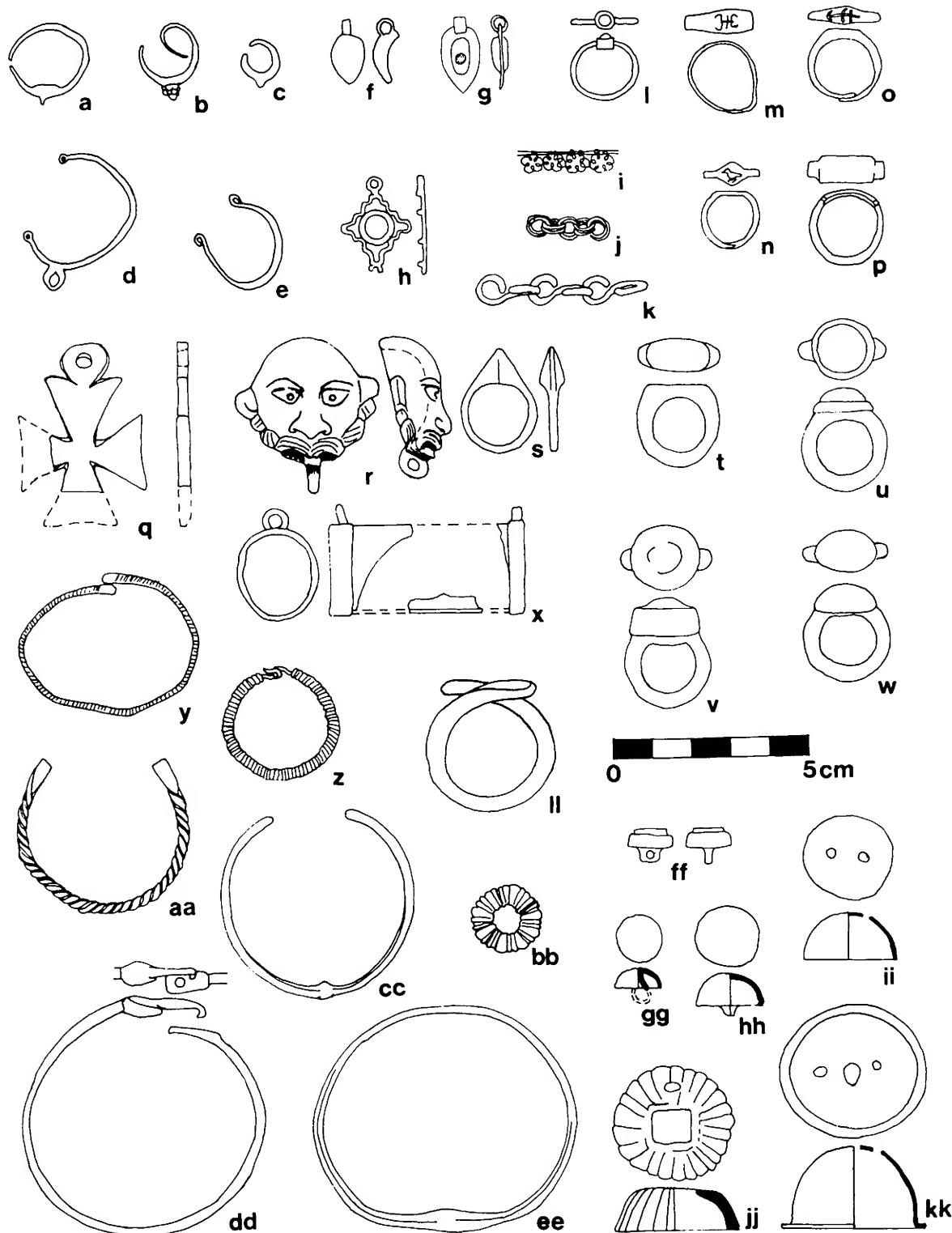


FIG. 67 Stone objects

	Description	Location	Photograph no.	Accession no.
a	black stone			33.175.100
b	black stone			
c	steatite		F376.1	34.107.103
d	alabaster(?)			
e	tortoise mottled agate	Kerim, near fire altar	F537.1	
f	black and white stone	Abbas Hashimi, NE		
g	black steatite		F376.2	
h	white limestone	Hajji Ali Agha (near Askar Ali burnt room)	F375.1	36.30.4
i	alabaster	from floor of Plaster Building (93)		
j	black stone	Ali Askar's burnt room	F374	
k	dark gray polished limestone			
l	alabaster(?)			
m	alabaster	N slope		
n	dark gray stone	Husein Ali Agha, N of fire altar		
o	alabaster(?)			
P	jasper	W slope	F167,168	
q	agate			
r	greenish mottled stone			
s	yellowish stone			
t	black stone	Jaafar, mud tower		
u	limestone cover	Museih, W end of Cut 1		
v	gray granite	Hajji Askar, NW cliff (11)		
w	coarse black stone			

FIG. 67 Stone objects

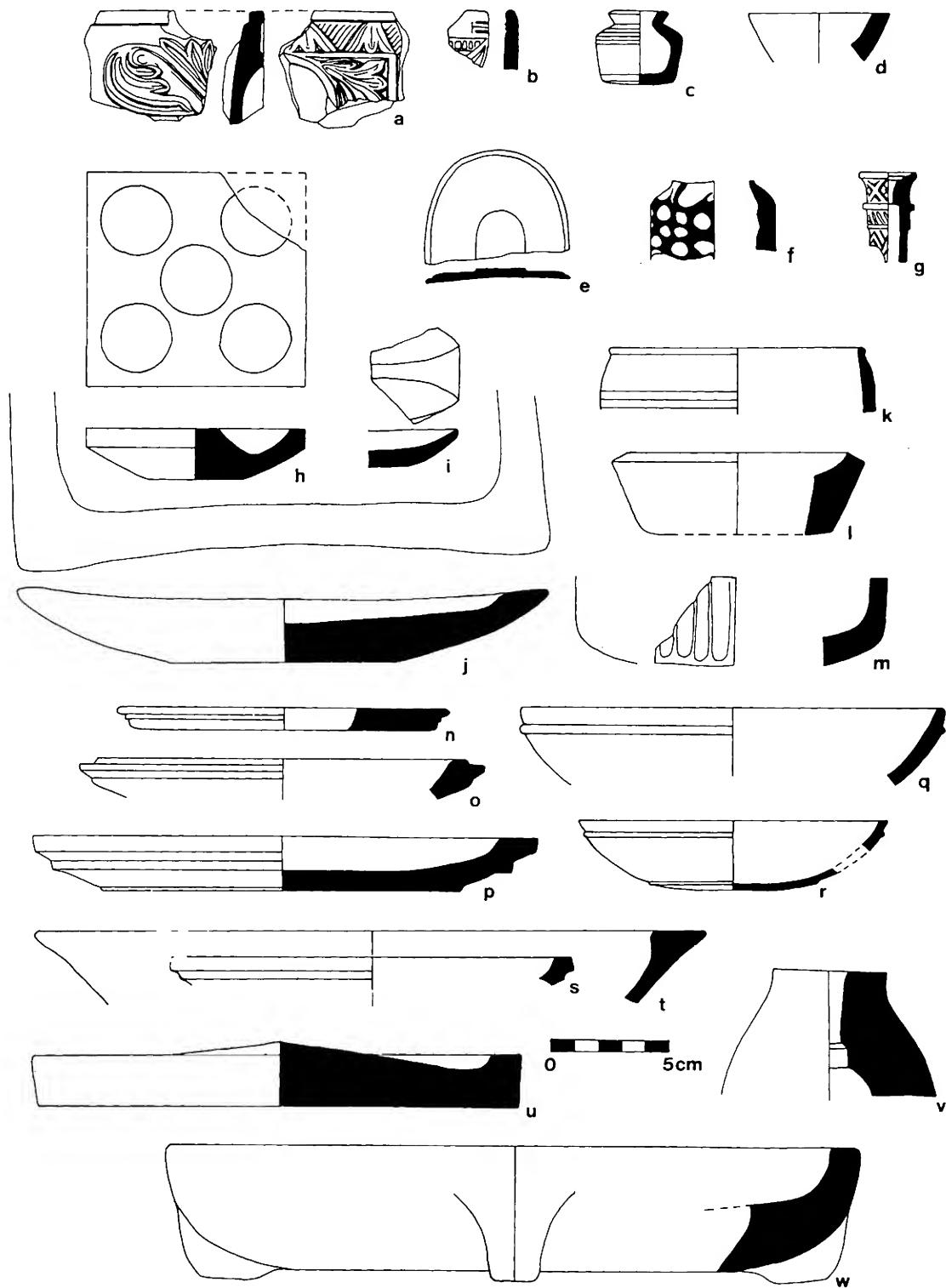


FIG. 68 Stone objects

	Description	Location	Photograph no.	Accession no.
a	white limestone	armor room	F375.2	
b	black, white veins	Jaafar round tower	F191	34.107.65
c	black, white carbonate		F369	36.30.14
d	dark gray stone	(23)		
e	bituminous limestone	B	F369	
f	gray-green stone		F369	
g	fine green stone	Husein Ali Agha, NW corner	F369	
h	gray stone	(10)	F369	
i	purplish stone		F369	
j	black stone	Jaafar, mud tower	F530.6	
k	black stone	Ali Alkbar's burnt room	F374.3	
l		N5	A292	36.30.1
m	gray stone		F530.1	
n	gray stone		F530.4	
o	gray stone		F530.5	
p	black stone (polished)		F530.2	
q	brown stone, circular section			
r	cord-worn pebble			
s		N side		
t	black stone	A	F190	
u	limestone	N		
v	limestone	Cut 4, S		
w	limestone, exterior tool marks	Haidar, N slope	F63,136	34.107.60
x	black stone, square	Cut 3		
y	limestone (cover used for grindstone)	(13)	F53	
z	limestone	by wall S of second defense	F321	
aa	limestone, 3 legs	Museih, N top	F329.1	
bb	limestone	B	F378.1	
cc	white limestone, exterior tool marks		F379.3	
dd	limestone		F378.2	
ee		Safar, room N	F60,379.1	

FIG. 68 Stone objects

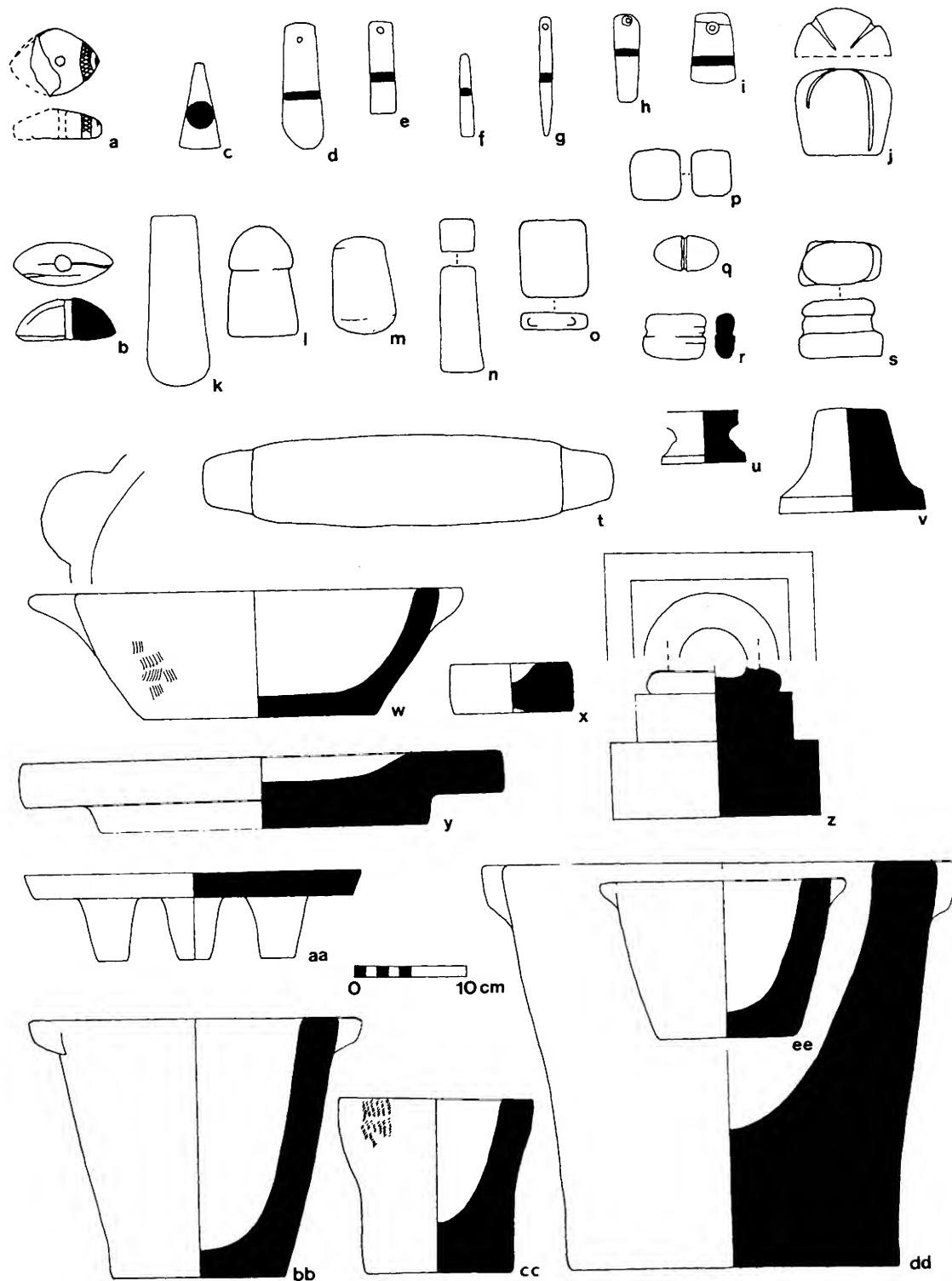


FIG. 69 Beads

	Description	Location	Photograph no.	Accession no.
a	carnelian, white paste		F545.1	
b	agate, white paste		F545.6	
c	carnelian, white paste		F545.5	
d	crystal			
e	ivory		F546.1	
f	black stone, white paste		F545.11	
g	agate		F390.24	
h	agate		F390.19	
i	mother of pearl		F390.9	
j	red, white glass		F231.12	34.107.121
k	black, yellow, red, white and blue glass		F231.11	34.107.120
l	white, red, blue, yellow and green glass		F545.18	
m	white, dark blue glass			
n	dark blue, yellow glass		F545.10	
o	black, yellow, gold glass		F545.8	
P	black, white glass		F231.4	34.107.118
q	white, blue, yellow glass		A171.19	33.175.114
r	green, white, red glass		F231.22	34.107.126
s	green, white, blue-brown glass		F231.18	34.107.127
t	red, green stone (?)		F231.20	34.107.128
u	black stone	Barfi, deep near Husein Ali Agha	F561.1	
v	blue frit		F541.1	
w	ivory		F542	
x	ivory		F542	
y	green stone		A171	33.175.114
z	green stone		A171	33.175.114
aa	black stone	dump, E slope	F553.1,554.1	
bb	steatite (?)		F390.34	
cc	pottery		F544.17	
dd	red, yellow, white glass		F545.15	
ee	black stone			
ff	amber glass			
gg	bitumen			
hh	white stone	W end of Cut 1	F529.8	36.30.16
ii	lead		F541.10	

FIG. 69 Beads

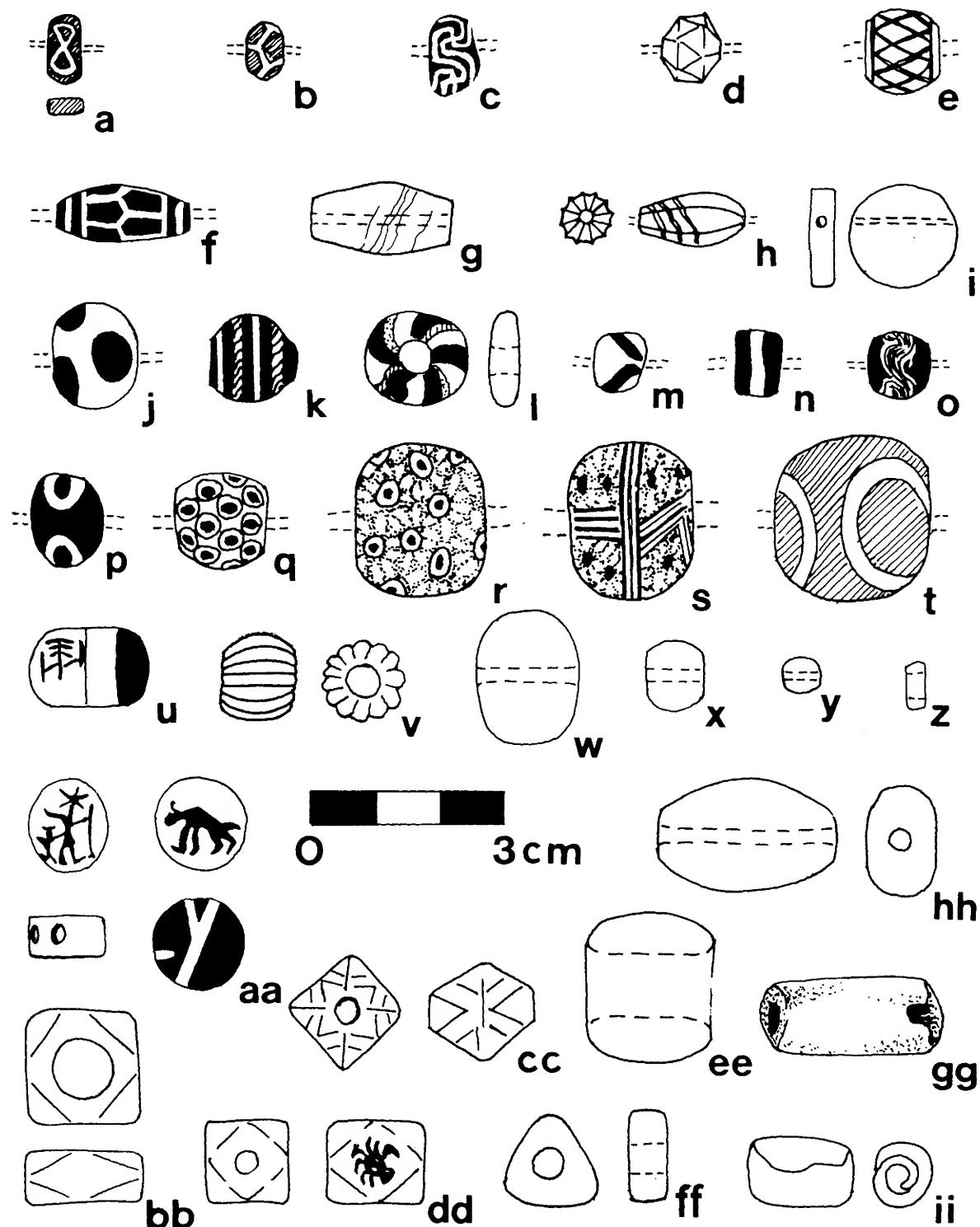


FIG. 70 Beads and amulets

	Description	Location	Photograph no.	Accession no.
a	green stone, copper	Abbas Hashimi, B	F248.10	
b	black stone		F534.5	
c	yellow glass	Husein Ali Agha, E side	F534.2	
d	glass	Kerim, E slope	F534.3	
e				
f	mother-of-pearl		F548.18	33.175.6
g	ivory	Kerim, E slope	F546.2	
h	carnelian		F248.9	34.107.111
i	agate			
j	stone		F390.13	
k	agate (?)			
l	carnelian			
m	red, brown glass (?)			
n	black and white stone			
o	carnelian			
p	lapis lazuli			
q	agate		F248.7	34.107.113
r	green stone		F248.11	34.107.110
s	dark green stone	Husein Ali Agha, NW corner	F248.5	34.107.112
t	cowry		F548.10	
u	shell	Museih	F534.4	
v	cowry		F548.4	
w	shell		F548.12	
x	cowry, carnelian, green stone on copper wire	dump, E slope	F534.1	
y	agate (?)	Ali Akbar, N of fire altar	F248.15	34.107.114
z	crystal			
aa	ivory		F546	

FIG. 70 Beads and amulets

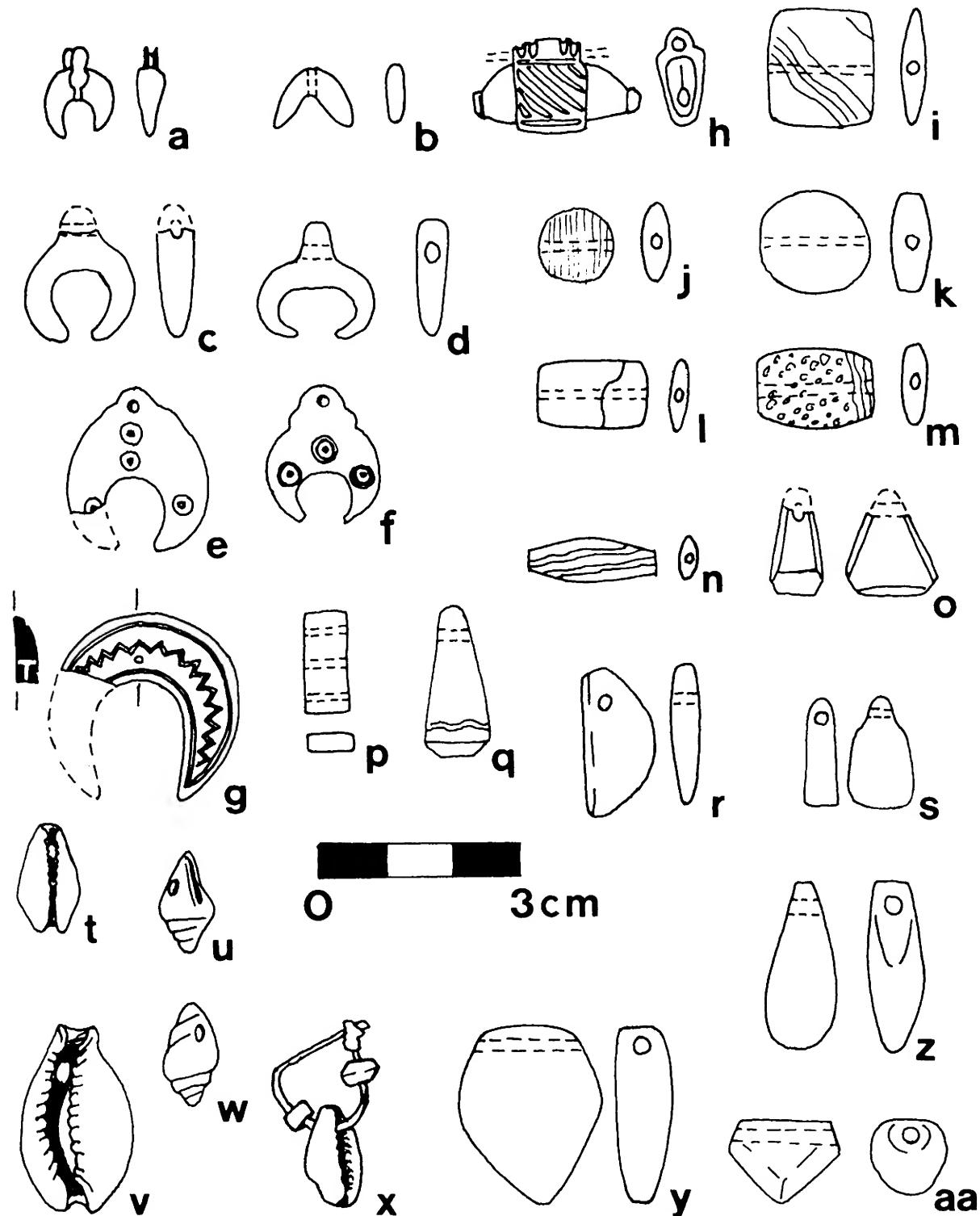
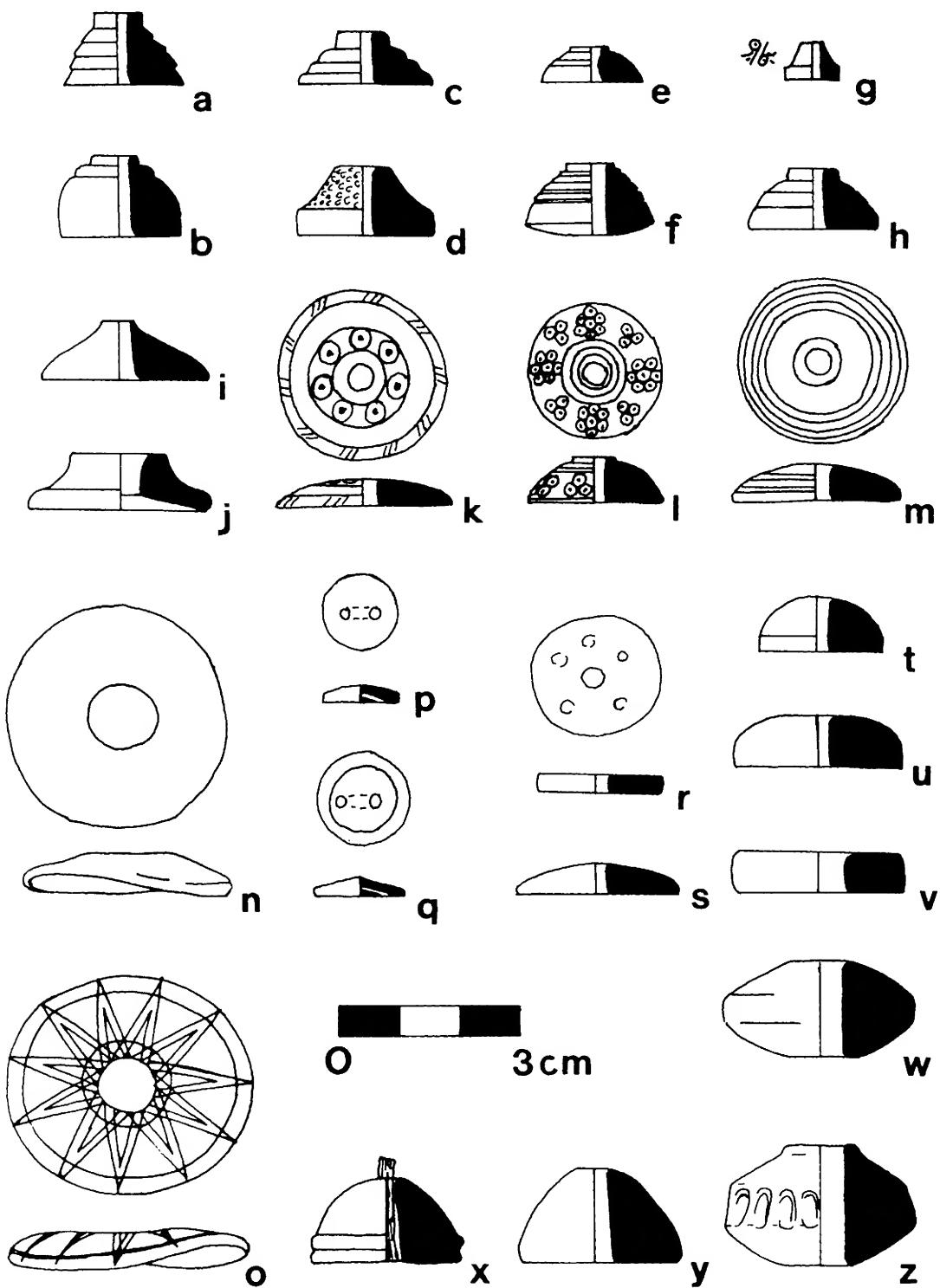


FIG. 71 Buttons and whorls

	Description	Location	Photograph no.	Accession no.
a	cream pottery			
b	cream pottery			
c	cream pottery			
d	buff pottery		F549.5	
e	black stone		F549	
f	black stone		F549	
g	bone	N Hump wall	A160.10	33.175.98
h	cream pottery			
i	red pottery		F549.3	
j	red pottery		A160.5	33.175.93
k	bone		A160.1	33.175.92
l	bone			
m	bone	Ziyad, room N side	F230.7	34.107.131
n	shell	B	F230.11	34.107.133
o	shell	Haidar, N slope	F230.9	34.107.132
p	bone	Ali Masum Ali, N side room	F546.4	
q	bone		F546.5	
r	red pottery		F549.1	
s				
t	limestone			
u	pink pottery	Ali Askar's burnt room		
v				
w	pottery		F536.4	
x	cream pottery, iron		F549.8	
y	brown stone			
z	pottery		F536.3	

FIG. 71 Buttons and whorls



and even flatter bone buttons, usually with incised decoration (Fig. 71k–m; these are commonly found on Sasanian-early Islamic sites, such as Istakhr; Pasargadae, 103.1; Susa 1979a, 72.10; Mahuz 1970–71, 90; Qumis 1979, 3d; Abu Sarifa, 16a; Hama 1969, 44.10–16, 45.1; Corinth, 2552, 2556). A few bone buttons have two holes joining inside the button and not visible on the obverse (Fig. 71p, q, found at Corinth, 2631, 2632). The large shells in this series may in fact have been used as beads (Fig. 71n, o). Flat or hemispherical objects made of stone or ceramic may have been either buttons or whorls (Fig. 71r–v; Fig. 71v was also found at Panjikent, 31.4). Larger artifacts of the same general style were no doubt whorls, and indeed one has the remains of an iron pin running through it (Fig. 71w–z, Pasargadae, 104.4,8; Panjikent, 31.16).

Figural Artifacts

Figural decorative arts seem to have played a relatively minor part in the life of the occupants of Qasr-i Abu Nasr. Three animal heads were found, a bronze figure of a bull or ibex (Fig. 72a, ill. in *BMMA* II, 35), a similar ceramic head, perhaps once part of a vessel (Fig. 72c is paralleled at Qal'eh Dukhtar 1976, 46.3), and a stone head of a bird, originally with inlaid features (Fig. 72b; Wilkinson 1965, 21; vaguely similar to Pope 1967 [1938], pl. 76). More humble terra-cotta figurines are numerous; these are mainly ambiguous quadrupeds (Fig. 72f–i; found on many sites, including Susa 1972b, 53.1; Qal'eh Dukhtar 1976, 7c; Corinth, pl. 2, 3, 4). Some of these figures may have represented horses used in conjunction with rather abstract riders (Fig. 72d, e, at Istakhr, 85) and perhaps approximating the common "Parthian rider" figurines. It is interesting to note that small animal figurines were a traditional gift for children at Now Ruz (New Year's Festival; Lambton 1968, 277).

Other figural artifacts (Fig. 73) begin with a black stone cube in the form of a kneeling man holding a club (Fig. 73a; a similar Sasanian figure was found at Ctesiphon 1933, 53). Perhaps the most interesting piece is a bronze pendant with two loops for suspension (Fig. 73b). One end of the pendant is a young man clothed only in a heavy collar, standing in a

rather classical contrapposto and grasping the ear of an animal, either a lion or a dog. This seems to be Heracles subduing either the Nemean lion or the dog Cerberus; a Sasanian silver vase shows both of these feats with similar iconography (Ghirshman 1975, 4.4; cf. Harper 1978, 13, 51–52). From the other end of the plaque emerges the head of a ram. Stylistically this bronze pendant with two loops combines the older "animal style" of bronzeworking, the "master of the animals" style, and a Classical rendering of the human form.

Smaller human representations range from the fine crystal head of a woman (Fig. 73d; Frye 1973, 14) to a rather crude head carved from a stone (Fig. 73e). Figurines include a small youth made of glass, perhaps Harpocrates (Fig. 73c, paralleled at Taxila, Marshall 1916, 20f–h), a blue glass hand (Fig. 73h, possibly related to those from cairns in Fars province, Stein 1936, 158, 29.6), a gray stone foot (Fig. 73i), and a blue-frit standing figure (Fig. 73g at Seleucia 1931, 11.2; Corinth, pl. 20). Two figural pieces seem to fit more in the Parthian-Sasanian tradition. The first is a frontal bust of a man made of bronze (Fig. 73f) and recalls the glass masks (Fig. 59c, in Frye 1973, 21); this piece is apparently the plate of a buckle, similar to those described by Ghirshman (1979, 1.2). The second is a large freestanding stone figure of a bearded man holding a sword; on the side is carved a round-headed niche or arrow slot (Fig. 73k; ill. in Frye 1973, 23–25; paralleled by a figure from Kish 1934, 15b, and statues from northwestern Iran—for example, Mudjesir, Boehmer 1973, 11–14). These contrast to the more classical bronze foot, approximately half life size (Fig. 73j; Frye 1973, 18, paralleled at Corinth, 504).

Miscellaneous

The last illustration of minor artifacts (Fig. 74) contains a selection of the unusual objects from the site. From the western area there is a ceramic lid with an animal and off-center hole (Fig. 74a; paralleled in many collections and from Susa 1928, 4.32c, 33, 34) and a fine piece of glazed sgraffiato ware depicting a bird (Fig. 74j ill. in Nishapur 1973, 57). A few bone implements, pins and a possible handle, may be related to similar pieces among the metal-

work (Fig. 74f-h; Susa 1972b, 36.1; Mahuz 1970-71, 79; Corinth, 1264-66, 1368; cf. Figs. 63ff, 65d). Similarly the stone weight (Fig. 74c) enclosed in iron bands may be related to the macehead (Fig. 68j). Other objects include a ceramic die, with opposite sides adding up to seven (Fig. 74d; Pasargadae, 169e-g; Istakhr; Susa 1943, 40.16). A number of shells have patterns of incised decoration (e.g., Fig. 74e), which may be related to the mother-of-pearl inlays found throughout the site and especially on the fortress (pl. 53; also at Ctesiphon, Upton 1932, 192). Another possible inlay is made of blue frit (Fig. 74b).

One artifact that should be mentioned is the clay tablet from the fortress (Wilkinson 1965, fig. 24). This tablet has a cuneiform inscription, written in Elamite, and two seal impressions (The Metropolitan Museum of Art, 36.30.62). According to the field notes, Haidar made the find on 12 November 1933 at the south end of the long mud wall on the west slope. The text (a list of livestock) and shape of the tablet is typical of the tablets found both in the Treasury and the Northern Fortifications at Persepolis. This tablet will be published soon with

the Metropolitan Museum tablet collection, edited by I. Spar.

The cairns on the mountain behind Qasr-i Abu Nasr, which will be discussed in Chapter IV, contained ceramic vessels and a variety of minor artifacts. Tomb 1 contained a glazed jar with a series of iron bracelets and neck rings (see below, Fig. 76b-e) and glass beads (Fig. 76f); the rings are somewhat different from those already discussed (Fig. 66cc-ee; these are paralleled at Bastam 1972, 50.7; Susa 1972b, 36.7). For the use of a shell ornament on a ring (Fig. 76e), see the example cited above (Fig. 70x). Tomb 6 contained two pitchers with a copper ring (Fig. 76k; cf. Fig. 66n-p) and a point (Fig. 76l; cf. Fig. 63b). Tomb 3 contained only a few pieces of iron and beads of glass and carnelian (Fig. 76m-p; cf. Figs. 66, 11, 69cc, w-y). An amulet case and a Mongol coin (according to the field notes) were found in Tomb 7 (Fig. 76q; cf. Fig. 66x). In addition to ceramics, Tomb 8 contained a buckle made of mother-of-pearl with an iron hook (Fig. 76r; vaguely paralleled at Pasargadae, 93.6). Tomb 11 contained a variety of ceramic vessels and an iron loop (Fig. 76y; like Fig. 66,11; Panjikent, 31.15).

FIG. 72 Figurines

	Description	Location	Photograph no.	Accession no.
a	bronze	Hajji Riza, room N side	F179	34.107.3
b	green stone; eyes are red, white, black inlay	Haidar, W slope	F163,164	34.107.63
c	brown pottery	Abbas Hashimi, N side	F219.1	34.107.102
d	buff pottery	Husein Ali Agha, NW corner		
e				
f				
g	buff pottery, red slip	Abbas Isa, N slope	F219.4	34.107.104
h	yellow pottery, traces of red paint	Haidar, room N side	F219.3	
i			F535.2	

FIG. 72 Figurines

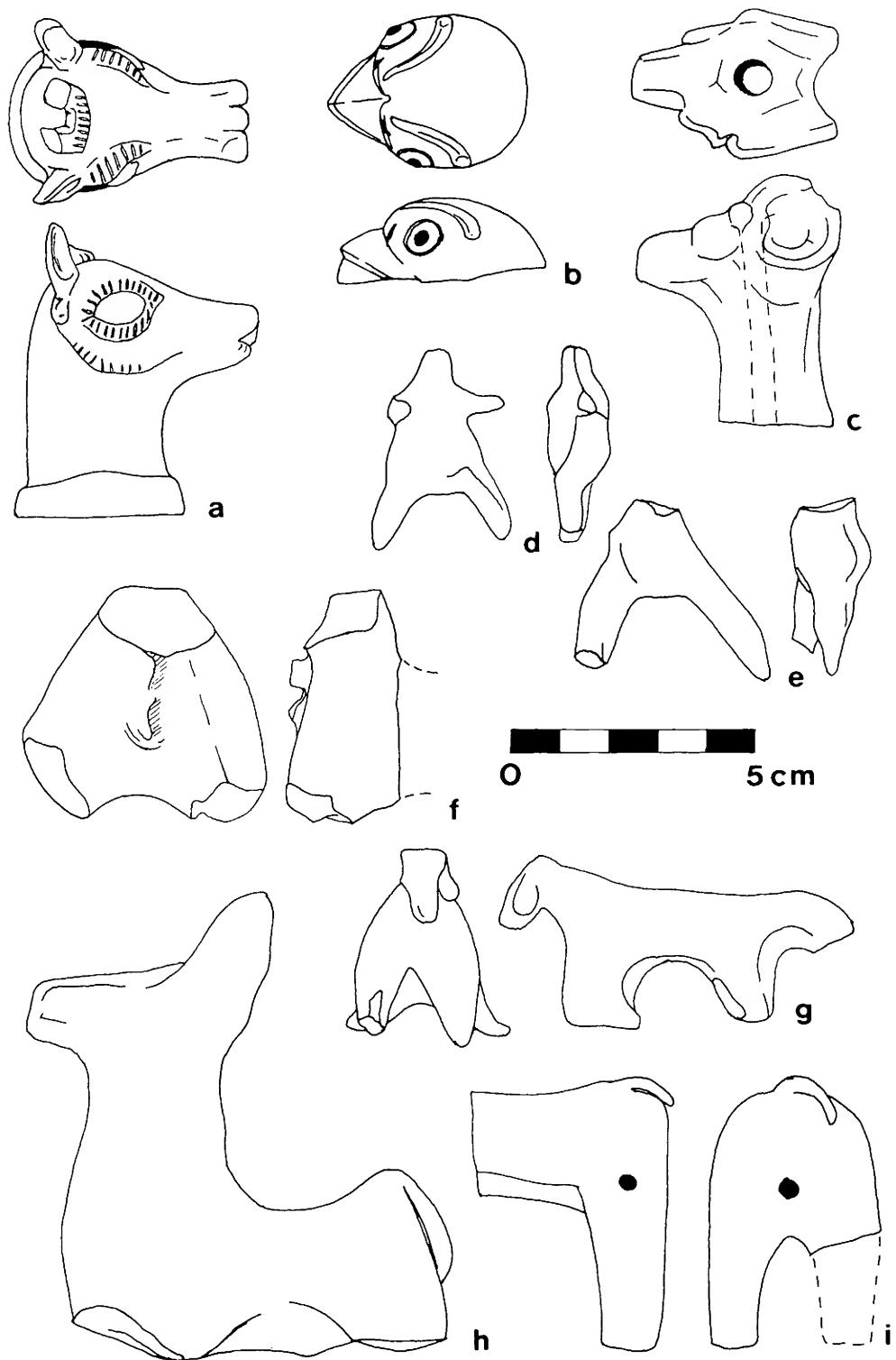


FIG. 73 Miscellaneous sculptures

	Description	Location	Photograph no.	Accession no.
a	black stone	Hajji Ali Agha, E side of A	F182,183	
b	bronze	Cut 4, S center	F171,172	
c	glass	N side	F385,386	
d	crystal	Ismail's burnt room	F301,304	
e	stone	by E-W wall of NW corner of Central House	F181	
f	copper	A	F169	
g	blue frit		A171.15	
h	blue glass			
i	dark gray stone			
j	bronze	Haidar, N end of long mud wall, W slope	F177	
k	stone	surface, between Cut 3, middle, and Cut 4, slope	F227-29	

FIG. 73 Miscellaneous sculptures

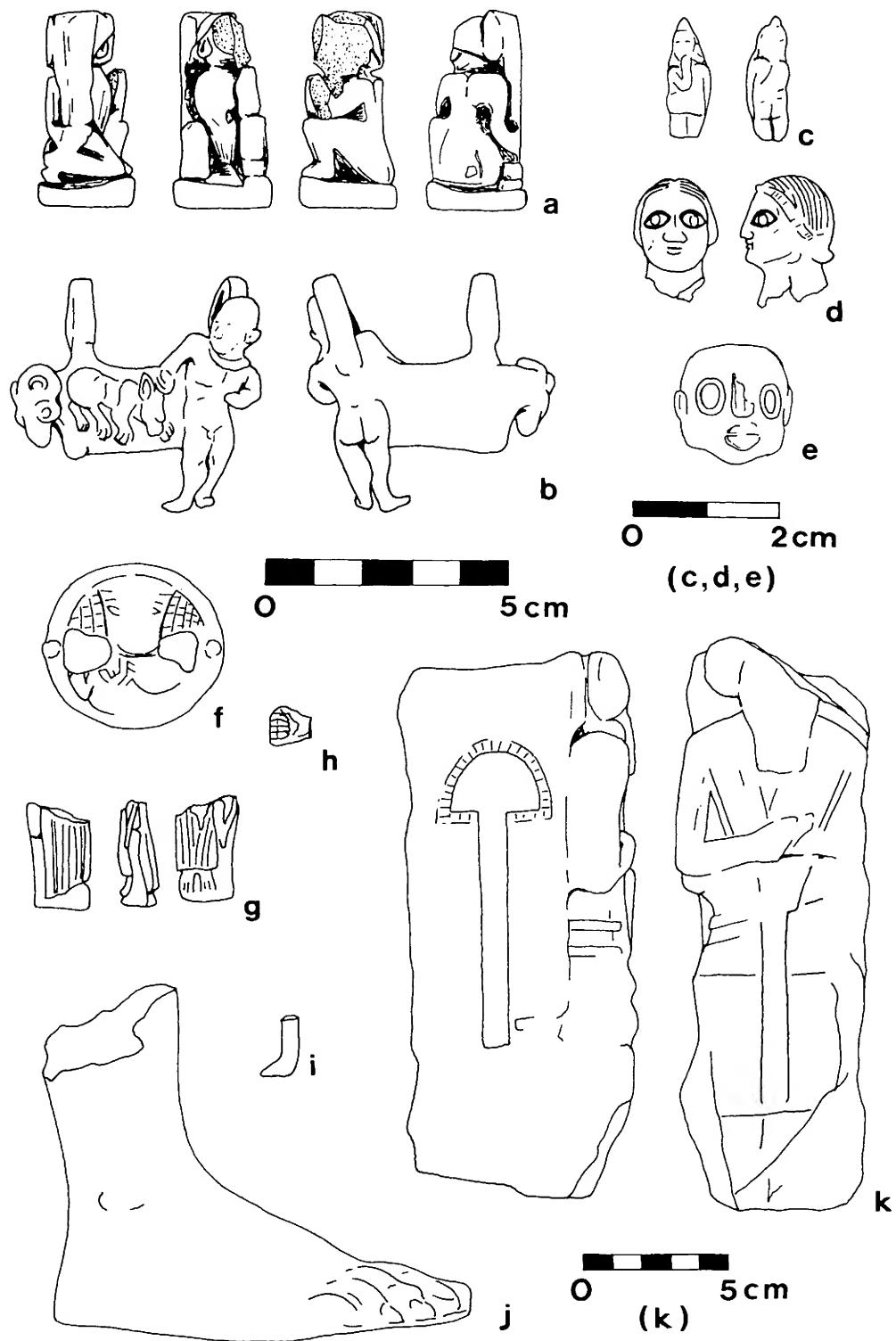
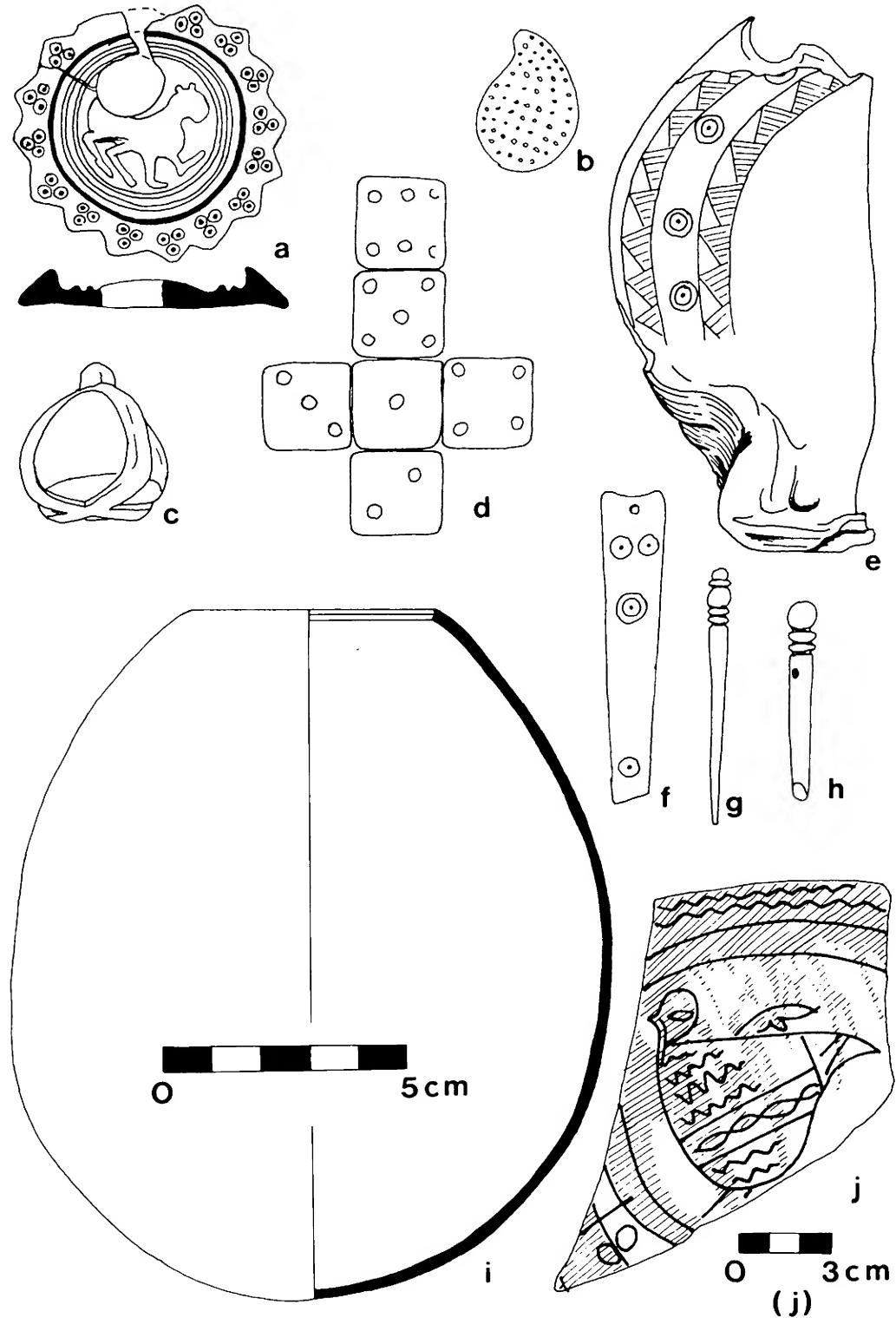


FIG. 74 Miscellaneous objects

	Description	Location	Photograph no.	Accession no.
a	greenish pottery	Room 20	A166	
b	"lapis paste"	B	F248.14	
c	stone in iron setting		F360	
d	red pottery	Ibrahim, N side	F536.1	36.30.7
e	shell	NW Front deep	A159.10	33.175.90
f	ivory	Mirza Husein room	F305.1	
g	ivory	Ali Agha, Cut 3	F305.2	
h	ivory	Husein Ali Agha, N of fire altar	F305.3	
i	ostrich egg	Cut 4, bottom	F518	
j	buff ware, green, yellow, white glaze, sgraffiato	Bin	A74	33.175.50

FIG. 74 Miscellaneous objects





top: PL. 29. View of the fortress from southwest, second defense in the foreground
bottom: PL. 30. Excavations in progress, from the podium looking north



top: PL. 31. View of the west side of the fortress

bottom: PL. 32. The stone bastion and podium with the entrance ramp sloping from the base of the bastion past the podium



top: PL. 33. East corner of the podium and Rooms 42 and 65

bottom: PL. 34. Areas A and B on the fortress, Rooms 9 and 10 in the foreground



top: PL. 35. West side of large storeroom 2 with pilaster base
bottom: PL. 36. Large storeroom 2 of the Central House



top: PL. 37. Mirza Husein's hole, Room 5

bottom: PL. 38. Room 16 near the northwest corner of the Central House with stones of earlier wall



top: PL. 39. South end of Plaster Building (93) with later walls and storage jars
bottom: PL. 40. Plaster Building (93) after removal of later walls



top: PL. 41. Storage jar with Pahlavi inscription
bottom: PL. 42. Ceramics with painted decoration (Fig. 49)



top: PL. 43. Fragments of glass vessels (Fig. 59)
bottom: PL. 44. Two glass bottles (Fig. 58)



top: PL. 45. Glass vessels with appliquéd decoration (Fig. 58)

bottom: PL. 46. Glass bracelets from the western area

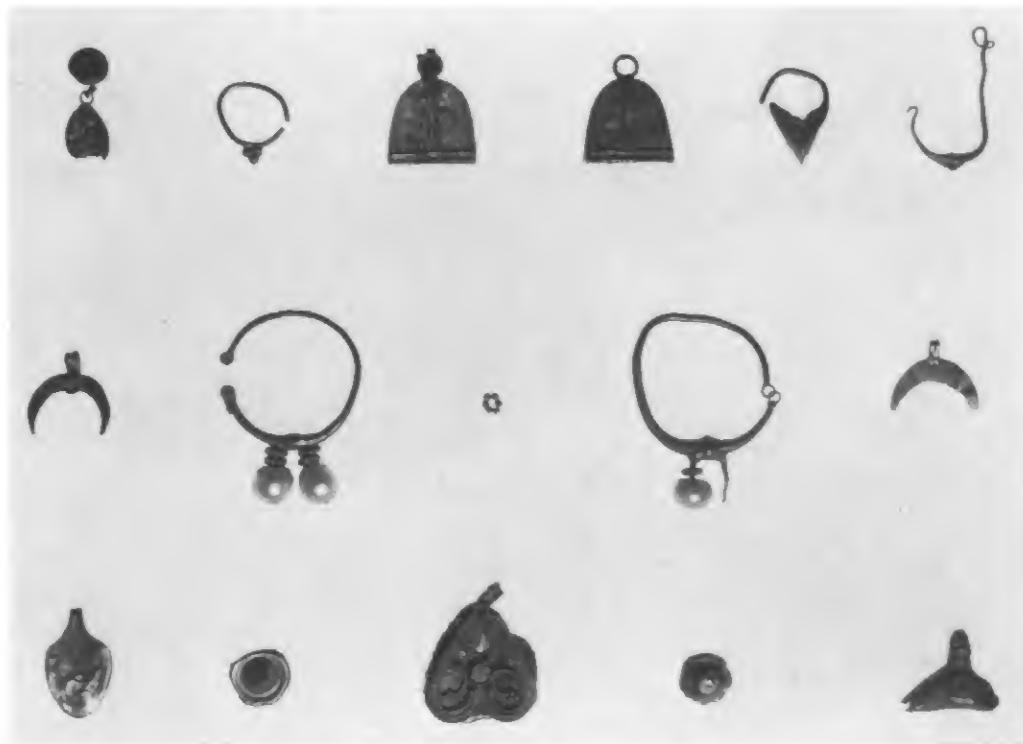


top: PL. 47. Iron and bronze armor (Fig. 63ee)

above left: PL. 48. Bronze buckle (Fig. 73f)

left: PL. 49. Bronze Bes head (Fig. 66r)

above: PL. 50. Bronze mirror or lid (Fig. 62f)



top: PL. 51. Silver and gold jewelry
bottom: PL. 52. Gold jewelry



top: PL. 53. Inlay pieces of mother-of-pearl
bottom: PL. 54. Mother-of-pearl inlay from the western area

CHAPTER IV

The Tombs and the Town

From the first season the excavators had observed cairns outlined against the skyline on the mountains behind Qasr-i Abu Nasr; when the light was right the upper surfaces of these hills were seen to be pockmarked with piles of stones. Though unlikely to yield treasures—treasures that had apparently eluded them on the site—this necropolis might be expected to reveal information on the culture of the inhabitants of the town. Thus, during the final season of 1934–35, several of the stone tombs were investigated (*BMMA* III, 176). Indeed, that the excavators, with their experience in Egypt, had saved the tombs for last is something of a surprise.

The stone tombs or cairns investigated were located on a ridge running roughly east-west. Approximately twelve tombs were opened and recorded (Fig. 75). Although there is no description of the ridge, the investigated tombs numbered perhaps half of the cairns on that particular ridge. An attempt was made to obtain as varied a sample as possible. Most of the tombs were circular piles of unworked stone, with larger facing stones on the periphery and along the shafts and chambers. The sides of the cairns were vertical to an approximate height of 1.5 meters; the interior of the tombs was filled in with irregular smaller stones. Lintel stones crossed the passages and chambers; there were indications that the original roofing was a continued piling of stones to form a shallow domed surface, although collapse and possible disturbance make confirmation of this hypothesis impossible. A second type of tomb was smaller and built against the natural vertical rock face of the mountain (Tombs 3, 5, with the former incorporating part of the overhang as the tomb roof).

Although the plans of these stone tombs vary dramatically, certain generalizations can be made. The entrance was placed in the cairn wall and blocked by a large stone, usually on the east-southeast side (exceptions are Tomb 3 on the west, Tomb 8 on the south). The entrance led to a passageway or shaft giving onto the chamber or chambers, all constructed on the relatively level surface of the mountain rock. There may also have been a more complex type of general plan, but the archaeological record is unclear. Records concerning Tomb 1 suggest a dual upper/lower level system; the upper level seems to have been an entrance shaft from the east on the roof, and the lower level a central chamber resting on ground level. Tomb 9 has no apparent entrance shaft and may also have been of this type. The interior plans range from a single central chamber at the end of the entrance shaft (Tombs 2, 3), a pair of side chambers leading from the shaft forming a T (Tomb 10), and a complex of three chambers (Tombs 6, 7) to five chambers (Tombs 4, 8). In several of the multichambered tombs one of the innermost side chambers was partially blocked by a row of stones (Tombs 4, 7, 8). A side chamber in Tomb 8 contained the pottery vessels. No skeletal material was ever recorded.

The failure to uncover treasures disappointed the excavation team, as Upton noted in the following summary:

There were hundreds [of tombs] built on the solid rock, roughly circular in plan and semi-circular in section, with from one to seven compartments. We uncovered and recorded

twelve and examined scores of others in the vain hope of finding one unfrifled. But time and the goatherds, who spend days in the mountains, had done their work of destruction thoroughly; and our only reward, aside from architectural information, was a few Parthian silver coins of the first century B.C. or the first century A.D. and some bits of pottery, iron, and mother-of-pearl of archaeological importance (BMMA III, 176).

The coins do not seem to have been preserved and were not included in Miles's catalogue; four silver coins and one copper are claimed to have come from Tomb 3. The silver coins were identified as belonging to Karpat and Pakuk, both about A.D. 100, according to the field records (Photograph F510, nos. 1, 4, 5, 6).

The contents of the stone tombs give some indication of uniformity; two each have a set of a juglet and pitcher (Tombs 4, 6) and another had at least the juglet (Tomb 8; Fig. 76). Other contents included a green-glazed jar (Tomb 1), a juglet, small bottle and other sherds (Tomb 11), and a variety of sherds (Hajji Ali Agha's Tomb). The most common items were jewelry: iron bracelets and necklets (Tomb 1), finger rings (Tombs 3, 6), glass beads (Tombs 1, 3, 8), carnelian beads (Tomb 3), shells (Tombs 1, 8), a mother-of-pearl buckle (Tomb 8), and an amulet case (Tomb 7). Iron objects, such as nails, were found in Tombs 3, 6, and Hajji Ali Agha's Tomb. Only one weapon was found, a spear point in Tomb 6. In addition to the three silver coins and one copper coin found in Tomb 3, a Mongol coin was found near the top of Tomb 7.

In dating and cultural importance, these monuments relate to the Iranian cairns studied by Lamberg-Karlovsky and Humphries, who summarized the literature and their own research in southeastern Iran (1968). Most of the systematic records of cairns are provided by Stein (1937) who notes over 5,000 from Pakistan into southern Iran. The prevalence of cairn mounds gradually diminishes westward; in the province of Fars only 150 have been reported (Lamberg-Karlovsky and Humphries 1968, 271). Of the three types of cairn construction noted by Lamberg-Karlovsky and Humphries, the third

bears the closest resemblance to the known and postulated characteristics of the Qasr-i Abu Nasr cairns:

A third form of cairn construction consists of a neatly piled, circular stone platform up to 1.5 metres in height, with another, smaller platform on top and sometimes a third platform on top of the second. The completed cairn resembles a stepped layer cake. A series of tunnel-like chambers runs horizontally into the interior of these cairns and in these chambers the burial remains are placed. This last style of cairn construction is known only in Fars province, but is associated there with the smaller formless type of cairn. Also, both forms share similar types of burial offerings (1968, 271).

The cairns Stein discovered are located in the Darabjird and Fasa region (Naqsh-i Rustam, Dogan, Bishezard, and Asmangird; Stein 1936, 158, 29.6), at Bushire on the coast (Stein 1937, 240-41), and near Shiraz (at Baghan, north of Kavar; Stein 1936, 114). The cairns at Bushire were found to contain sherds of glazed and unglazed pottery and lay directly behind the extensive Sasanian ruins of Rishahr (Whitehouse and Williamson 1973, 37). Cairns have also been observed on the Kuh-i Rahmat behind Persepolis (Gotch 1971, 162-63) and at the southeastern limit of this mountain near Qadam Qah (pers. observ.), as well as on the mountains north of Siraf and in the Tang-i Bulaghi, near Pasargadae (1978, 261, pl. 145a, b). The cairns in these locations and at Qasr-i Abu Nasr seem to be placed on mountain slopes behind settlements, suggesting that many more sites within the parallel ranges of mountains in Fars province may be associated with unobserved examples of this funerary pattern.

The vexing problem of dating these monuments must begin with the recognition that cairns—or better, cairn fields—seem to belong to discrete cultural periods within a possible span of some 2,000 years. The great majority of cairns in Baluchistan, Oman, and the Emirates (Stein 1937; de Cardi 1971, 1976; Frifelt 1975), as well as those in Bahrain and Saudi Arabia (During Caspers 1972-74; Adams et al. 1977, 29-30) and even Central Asia (Azarpay 1981), seem to have only a broad morphological connection

FIG. 75 Stone tombs

<p>Tomb 1</p> <p>Circular cairn with entrance shaft from east on upper level; single central chamber on lower level (pl. 56) Green-glazed jar (Fig. 76a), two iron necklets (one with shell; Fig. 76c,e), five iron bracelets (Fig. 76b,d), three glass beads</p> <p>Tomb 2</p> <p>Circular cairn with entrance shaft from east-southeast; single central chamber. Located near the cliff edge No artifacts recorded</p> <p>Tomb 3</p> <p>"Museih's cave tomb." A natural stone overhang with a constructed stone wall blocking the northern half. The entrance from the west leads to a single central chamber. Four small silver coins, one copper coin, an iron ornament, and a finger ring (Fig. 76m, n), eighteen carnelian beads (Fig. 76p), six glass beads and one polyhedral blue glass bead (Fig. 76o), an unpierced glass sphere (bead?)</p> <p>Tomb 4</p> <p>Circular cairn with entrance shaft from the east; five side chambers. The innermost north chamber was partially blocked by a row of stones (pl. 58). Juglet and pitcher (Fig. 76g,h)</p> <p>Tomb 5</p> <p>Semicircular cairn built against cliff face, the stone construction forming the west half and roof. Location of the entrance is uncertain. A single chamber oriented north-south No artifacts recorded</p> <p>Tomb 6</p> <p>"Last tomb toward Shiraz" (i.e., westernmost tomb on ridge). Circular cairn with entrance shaft from east-southeast; three chambers Juglet and pitcher (Fig. 76i,j), spear point (Fig. 76l), copper or brass finger ring, bezel missing (Fig. 76k), fragment of iron nail with square section</p>	<p>Tomb 7</p> <p>Circular cairn with entrance shaft from east-southeast; three side chambers with the southern chamber partially blocked with a single stone (pl. 57) Mongol coin found near top of cairn and a copper amulet case (Fig. 76q)</p> <p>Tomb 8</p> <p>Circular cairn with entrance shaft from the south protected by a semicircle of stones, possibly the remnants of a constructed anteroom. Four side chambers and possibly one chamber at the end of the shaft. The deepest west chamber, partially blocked by two stones, contained the pottery vessel and fragments (pl. 59). Juglet (Fig. 76t; same as Fig. 45d), two necks of jars (Fig. 76s), mother-of-pearl buckle with iron hook in shape of bird's head (Fig. 76r), two shells, and a bead</p> <p>Tomb 9</p> <p>Circular cairn with no apparent entrance shaft; only a small central chamber, oriented east-west No artifacts recorded</p> <p>Tomb 10</p> <p>Circular cairn with entrance shaft from the east forming a "T" with the two side chambers No artifacts recorded</p> <p>Tomb 11</p> <p>"Hajji Askar's one seater taken to make platform." Located near Tomb 10; no plan available (identification as Tomb 11 determined from photograph F345.2) Juglet with a narrow neck (Fig. 76u), a small bottle (Fig. 76x) and sherds (Fig. 76v,w), and an iron loop (Fig. 76y)</p> <p>Hajji Ali Agha's Tomb</p> <p>"A 4 seater"; presumably contained four side chambers. No plan available "Pink" and buff gritty sherds, sherd of a rim of yellow ware with green glaze (like Fig. 76a), sherds of a handle, sherd of a jar with the start of a handle, sherd with a dark red smooth slip on gritty "pink ware," large headed iron nail</p>
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FIG. 75 Stone tombs

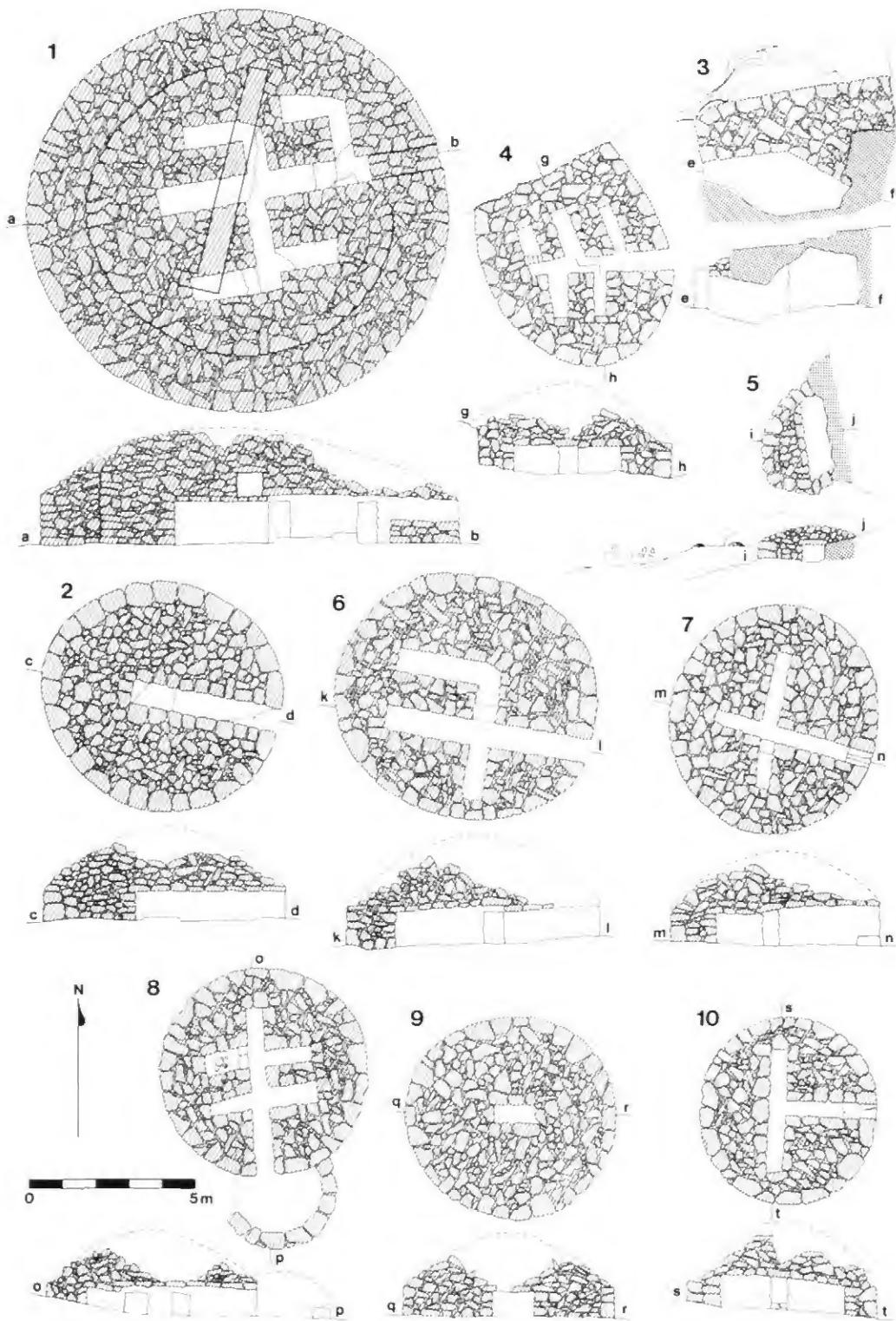
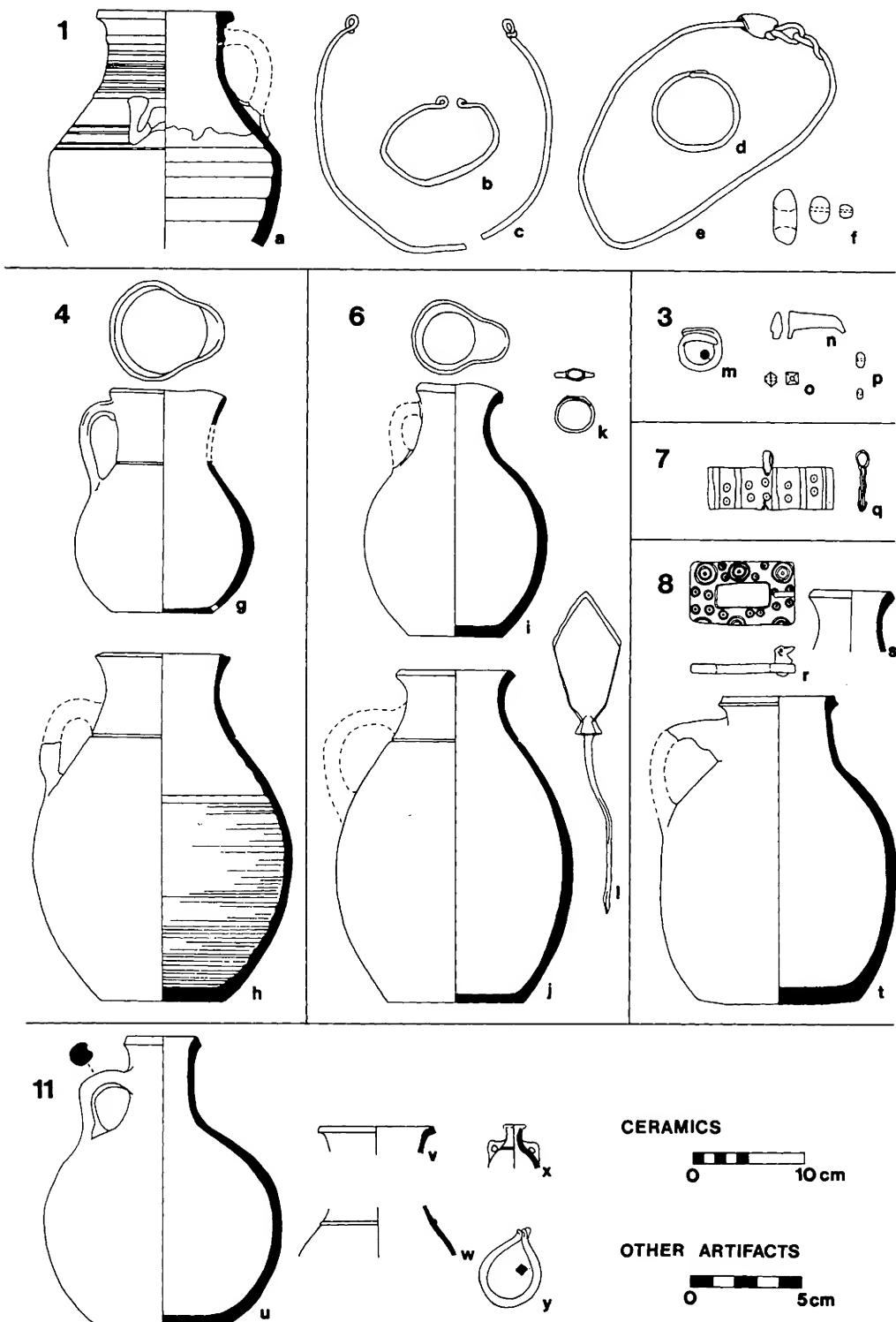


FIG. 76 Objects from the tombs

	Description	Location	Photograph no.	Accession no.
a	buff ware; bright olive green glaze, cracked	Tomb 1		
b	iron	Tomb 1	ST26	
c	iron	Tomb 1	ST25.2	
d	iron	Tomb 1	ST26	
e	iron with a shell	Tomb 1	ST25.1	36.30.65
f	glass beads	Tomb 1		
g	soft, gritty, yellow ware	Tomb 4		
h	gritty pink-buff ware	Tomb 4	ST23.2	
i	gritty greenish ware	Tomb 6	ST24.2	
j	gritty pink-buff ware; possible cream slip	Tomb 6		
k	copper	Tomb 6	ST29.1	
l		Tomb 6	F373.1	
m	iron	Tomb 3	ST29.2	
n	iron	Tomb 3		
o	blue glass	Tomb 3		
p	carnelian and glass	Tomb 3		
q	copper	Tomb 7	ST27,28	
r	mother-of-pearl, incised, with iron hook	Tomb 8	ST30,31	
s	gritty buff ware	Tomb 8		
t	pink-orange-cream ware, large black grit and much chaff temper (cf. Fig. 45d)	Tomb 8	ST24.1	36.30.41
u	gritty buff ware	Tomb 11	ST23.1	
v	gritty gray ware, brittle	Tomb 11		
w	gritty gray ware, brittle	Tomb 11		
x	fine dark gray ware, originally black slip or paint	Tomb 11	F345.2	
y	iron, top broken	Tomb 11		

FIG. 76 Objects from the tombs



with those of Fars province. A more positive approach to the dating of cairn fields was explored by the Harvard Oman Survey (Hastings et al. 1975, 15 n. 8); on the basis of the numerous cairns encountered and their locations, it was suggested that, although necropolises might develop along trade or migratory routes, most cairn fields were associated with settlements and dated to some part of the entire occupation of the settlement.

The more direct (and obvious) method of dating these monuments is by means of the artifacts contained within them. Unfortunately many cairns either contained no funerary goods or personal effects when built or were subsequently plundered, as has been suggested for those at Qasr-i Abu Nasr. It may be noted, as an example, that the "Parthian" tombs investigated at Seleucia contained, on the average, artifacts of the same character, quantity, and quality as those within the Qasr-i Abu Nasr tombs (i.e., rings, bracelets, pottery, and a few beads, Yeivin 1933, table III). The three cairns opened at Sar-i Asiab similarly contained few artifacts. Cairn Burial Two, however, offers an interesting comparison to Qasr-i Abu Nasr. This cairn contained a finger ring, a piece of iron, reddish clay beads, a blue glass bead, three ceramic vessels, and some animal bones (Lamberg-Karlovsky and Humphries 1968, 270, fig. 1). With the exception of the animal bones, these goods compare with several of the tombs considered here. Furthermore the vessels, which include a one-handled jar and pitcher, parallel the pattern postulated for Qasr-i Abu Nasr and resemble specific Qasr-i Abu Nasr forms (Lamberg-Karlovsky and Humphries 1968, pls. 1f, g; viig; viiiip, q; Fig. 76i, u). No close parallels for the three vessels found in Cairn Burial Two at Sar-i Asiab were identified in the published materials from the excavations at Yahya (1970), although some vague associations may be made with the Partho-Sasanian occupation (Phase 1), and the Sar-i Asiab cairns are given a cautious "late first millennium" date (Lamberg-Karlovsky and Humphries 1968, 276). The rare numismatic evidence suggests a Parthian date at Dambah Koh and late Sasanian at Bishezard (Lamberg-Karlovsky and Humphries 1968, 274; Stein 1936, 158-59). What is needed is a systematic survey of all known tombs of this date, not just those with cairns above them. As an example one may note the well-excavated

tombs at Susa (1972b, 75-77), which may be dated to the late Parthian and early Sasanian on the basis of coins, containing a comparable range of jars (albeit usually glazed) as grave goods (see also Dura Europos 1946, for Parthian grave goods). In general the sum of this evidence to date indicates that the cairns at Qasr-i Abu Nasr are typical of cairn burials in southern Iran during the late Parthian period with continuity into the Sasanian period.

The Town

The investigations of the stone tombs provide additional evidence for the earliest occupation at Qasr-i Abu Nasr but do not amplify our understanding of the subsequent history of the site. Beyond evidence for dating and religion, cemeteries in the archaeological record ideally contribute to an understanding of the settlement population, its density and physical and cultural characteristics. If the Sasanians at Qasr-i Abu Nasr followed strict Zoroastrian funerary practices—entombing only the bones of the deceased with no grave offerings—then Sasanian cemeteries would provide minimal cultural information. Lacking this evidence one must rely on the evidence of the settlement itself. At Qasr-i Abu Nasr this comprises the town within the amphitheater between the specialized elements—the western area and the fortress—which have already been discussed. Only a limited amount of excavation was undertaken in the town, and most of this was apparently left unrecorded. Three aspects may be considered here: the northern defensive wall, the second defense, and the cuts or exploratory trenches within the town (see Fig. 2).

The mound between the western area and the second defense of the fortress is high and forms a steep slope down to the level of the plain. The excavators assumed, probably correctly, that a southern defensive wall would have protected this flank of the town, although no trace of this southern wall was observed or recorded. The wall of the northern side was readily apparent before excavation as a series of mounds crossing the lower flat and stretching from the fortress to the northern part of the western area, a line connecting the "horns of the crescent." The wall changes direction in the northwest portion near

a "huge round tower" (*BMMA* I, 42), and traces of walling, with a possible second round tower, lead to the buildings of the western area. East of the round tower are a pair of towers and behind them is a single symmetrical room; this may well have been a gate to the town. Otherwise the wall seems to have been a double mud-brick wall separated by long corridors or ramparts. The square towers (usually 7 x 7 meters; preserved height, .5 to .9 meters) are spaced about 25 to 35 meters apart. The towers seem to have been built on a mud-brick plinth, as indicated by Towers 2 and 4 (see below, Fig. 80), the latter of which has a major entry into the rampart. Tower 6 takes advantage of a natural rock outcrop, clearly visible in photographs. In addition to the two towers of the presumed gate, there are nine square towers and a bastion attached to the rock face of the fortress. Along the entire length of the wall the excavations revealed walls of attached buildings; these buildings are usually oriented with the length of the adjacent wall; a few are oriented with the buildings of the town.

Ceramics from the northern wall share the limitation afflicting other aspects of the excavation; the find spots are not recorded and therefore they cannot be used to determine the date of that structure. Most of the pottery was probably from immediately beside the wall or in the corridors of the wall itself; the most common shapes are jars and pots, as might be expected in a nonresidential, defensive situation. Most of these vessels relate to examples found in the western area and in the fortress collections. According to the provisional dating of the fortress ceramics and the seriation of the western area ceramics, these northern wall ceramics are late Sasanian (Fig. 77a, b, d, j, k) and late Parthian-early Sasanian (Fig. 77c, g, h, i, l, o). Comparisons with the western area are almost all late Sasanian, as are the few pots from around the rock outcrop (Fig. 77d, j, q). Thus, although it seems likely that the northern area of the town may have been in use during the late Parthian and early Sasanian periods, this wall was continued, or possibly was built, in the late Sasanian period.

The northern wall may be contrasted with the tongue of high ground extending south of the fortress, called the second defense by the excavators (see below, Fig. 80). A second wall facing in toward the town, was excavated in this area. From the gatehouse

of the fortress this wall had three round towers; the westernmost point had a large round tower. At least fourteen arrow slits were found in this wall. While there is no clear record of the excavations on this wall or the area behind it, the location seems to be the referent of "Jafar, by round tower" and "Jaafar's tower," excavated during the second season. The eastern side is limited by a steep slope, but no trace of another wall seems to have been found. The interior of this area contained "a few buildings now so far gone that their character is quite uncertain" (*BMMA* II, 8); probably more buildings along with the eastern wall have been eroded over the eastern side of the slope. A stone column base (see Fig. 68z) seems to have been found in this area. The area thus described by the wall and slopes suggests a pentagonal shape for this defensive structure.

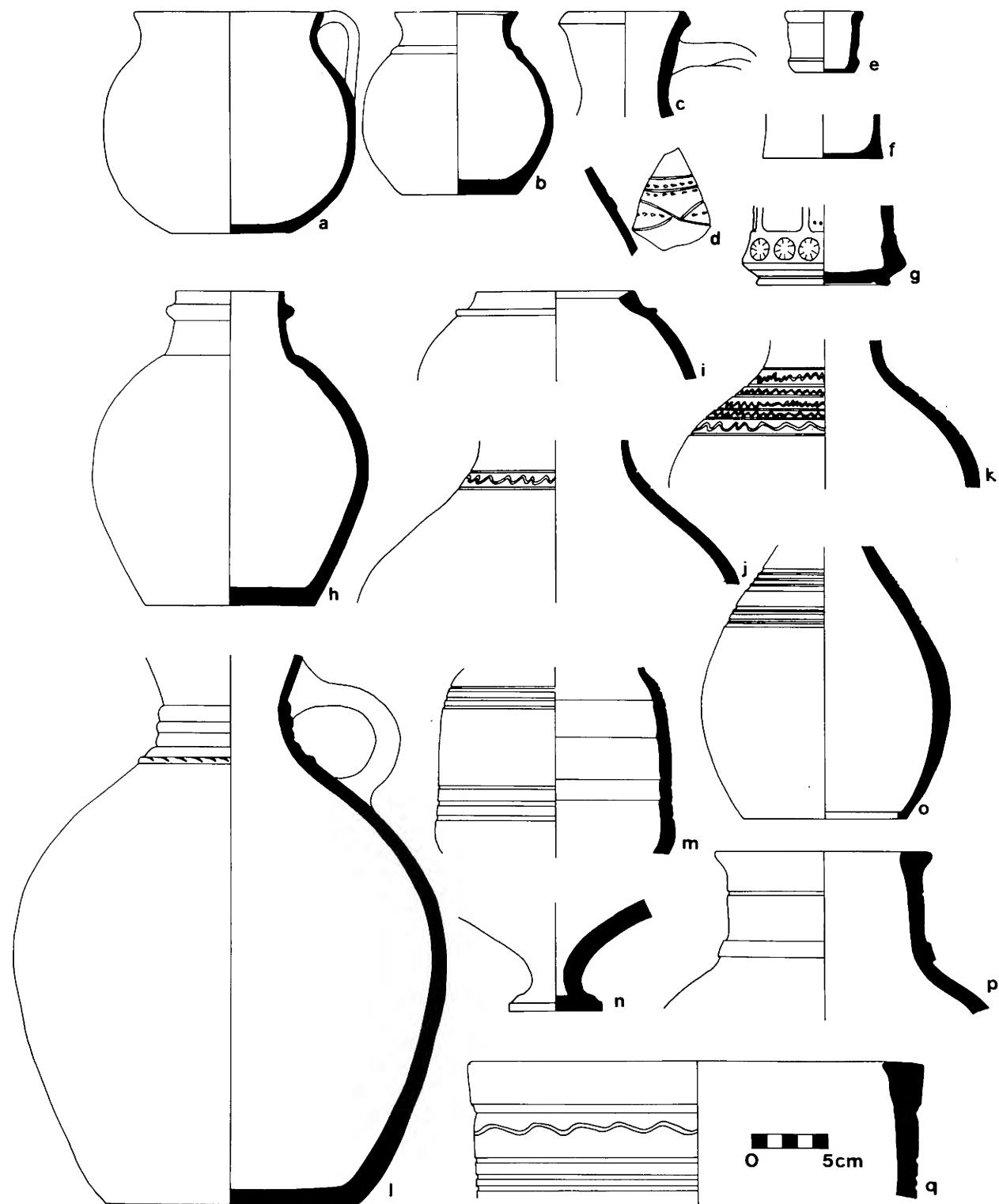
The ceramics associated with "Jaafar's tower" are large barbotine jars (Fig. 42a, b), a painted jar (Fig. 49d), a glazed bowl (Fig. 50a), a polished red-slipped bowl and other bowls (Fig. 51aa, bb, cc), and a black-slipped incised jar (Fig. 55v). A glass jar (Fig. 58bb) was also found in this area. All of the ceramics are provisionally dated to the late Parthian or early Sasanian period, with the exception of the glazed bowl, which may be late Sasanian or early Islamic. It would thus appear possible that the second defense was actually primary, that it antedated the northern wall and served as a focus for the earliest town.

Investigation into the nature of the town itself, where Herzfeld (1926, 250) had first noted indications of many buildings on the flat surface, was confined to a series of cuts or long trenches. The longest of these trenches is almost 200 meters in length. Hauser summed up the information acquired from the cuts: "The cuts . . . on the inner slopes of the hill and the floor of the valley showed much of the area to be town. Cut 3 gave us two levels, the lower of which, like that on the fortress, is better built and has rather larger rooms than the upper. But nowhere have we as yet struck any building with architectural distinction" (*BMMA* II, 10-12). Little additional information is available from the extant records. The few plans (see Fig. 2) are without notes, and it is readily apparent from both ground and air photographs that many more structures were uncovered than were noted. Cut 1 was on the northeast part of

FIG. 77 Ceramics from the north wall of the town

	Description	Location	Photograph no.	Accession no.	Comparanda (Figures)
a	gray ware	Ziyad	F139.1		16e, 47a
b	cream ware, shaved base grit and chaff temper	Ziyad	F158.1	34.107.35	19c, 47b
c	light brown ware	W end			45d
d	gray ware, gray slip, incised shoulder	next to outcrop			55u
e	buff ware, blue-green glaze on interior and exterior				
f	fine pink ware	W end			
g	buff ware, stamped				54m
h	coarse greenish gray ware, buff wash on exterior	Muhammad Husein	F153.2		46i (also from N wall)
i	buff ware, chalky white slip on interior and exterior				42d
j	coarse pink ware, buff slip, incised	next to outcrop			16f, 45a
k	brown ware, buff slip, incised	W end			16d,e; 45a
l	coarse greenish ware	Hajji Askar	F121.2		16h, 45d
m	coarse greenish ware				
n	gritty buff ware				
o	hard green-gray ware, buff slip				46i, 56f
p	greenish ware	E end against fortress			
q	buff ware	next to outcrop			22u, 40i, 52m

FIG. 77 Ceramics from the north wall of the town



the fortress (see Chapter III); Cuts 2 and 6 were on the slopes of the fortress, the west and north respectively, and were apparently unsuccessful, as no record of structures or artifacts exists.

Cut 3 was placed across the mounding of the southern part of the site, immediately northwest of the dig house (see Fig. 2). This trench did not extend far enough to the south to encounter the south wall of the town; the two lines on the field map of the site, south of Cut 3, may indicate a surface indication of this wall. As Hauser mentioned, there were two levels of buildings, which by implication reflected the same occupation periods as those of the fortress. The extant plans show portions of rooms oriented with the direction of the slope on the ground (diagonally to the direction of the trench). The ceramics from Cut 3 were jars and pots with a number of slipped juglets (Fig. 78b, c, f, g), painted wares (Fig. 78h, i, m, n, f), and blue-green glazed wares (Fig. 78d, e, j, l; see *Dura Europos* 1943, 21, 24). The vast majority of the comparanda in the western area and the fortress are with late Parthian or early Sasanian ceramics on the fortress (Fig. 78b, c, d, g-i, k, m, o, t); the few forms that are apparently late Sasanian are mainly comparable to western area ceramics, although a number are from Islamic areas, no doubt from mixed loci.

Cut 4 began near the octagonal building (N11) on the heights of the western area and ran down the slope. Halfway down, the excavators encountered a large wall and followed this structure briefly to the north. Then a long trench was cut perpendicular to the first along the slope; this southern trench was at first called the "south arm" of Cut 4 and eventually Cut 4A. Numerous structures were uncovered but were apparently left unrecorded (pl. 63). Near the northern part of the large wall of Cut 4 was a mass of burnt brick and toward the south was a white limestone column (67 centimeters long; 45 centimeters in diameter). This wall follows the contour of the slope and was more or less oriented with the structures of Cut 3. A number of interesting artifacts were found in Cut 4, among which were an ostrich eggshell (Fig. 74i), a bronze figurine (Fig. 73b), an earring (Fig. 66d), a kohl pin (Fig. 65, o), and a buckle (Fig. 64g).

The ceramics from Cut 4 are also distinctive (Fig. 79). Over half of the artifacts illustrated have no

close parallels from the other excavations. In addition to the usual pots and jars, there are two vessels with delicate and unusual forms (Fig. 79k, q), glazed vessels (Fig. 79b, v, the latter of which has a distinctive late Parthian-early Sasanian form typical of Mesopotamia), a raised monogram (Fig. 79s) and a tuyere (Fig. 79t). As in the case of Cut 3 and on the fortress, these comparanda show a majority of ceramics, probably of late Parthian or early Sasanian date, with only a few presumably late Sasanian comparanda from the western area.

Finally the excavations called Cut 5 were an extension to the north of the work in the western area, particularly structures associated with the Octagonal Building (N11). Again the recording of these structures seems to have been left incomplete; no artifacts have been associated with this cut, with the exception of a few stuccos (Fig. 13f, g, t). These stuccos are very similar to those from the Octagonal Building and probably come from that structure. Orientations of the buildings in Cut 5 are varied, conforming in the south to the orientation of the Octagonal Building and farther north to the line of the city wall (northwest section).

The evidence for the town, based on the excavations of the cuts and walls (the northern wall and the wall of the second defense) is admittedly meager. The following analysis of the town plan must therefore be considered no more than a preliminary hypothesis (Fig. 80). As in the discussion of the organization of cadastral aspects of the fortress, this analysis is based on the belief that towns of this period were subjected to careful surveying or a superimposed plan, and it gives particular importance to the orientation of structures and blocks of dwellings. This assumes more order and systemization than was likely to have been the case, but it nevertheless permits a tentative ordering of the patterns of occupations at Qasr-i Abu Nasr.

The earliest occupation of the town was during the late Parthian or early Sasanian period (Phase 1 on the fortress). The orientation of the town was that of the structures in Cuts 3 and 4, and it conforms with the possible lines of the south wall and with the section of the north wall between the gate and Tower 2. The orientation is picked up, probably accidentally, along the steep slope east of the second defense, where it follows the presumed natural contours of the land. A rectangle

aligned with this orientation measures 360 x 480 meters, from the north to south walls and from the gate to the east slope of the second defense. This rectangular town with a small fortification in the northeast corner is a pattern Kiani found often repeated in the fortified town along the wall of Gurgan (presumed to have been Parthian; Kiani 1982). This town might have been subdivided into blocks 80 meters wide (generally east-west) and either 120 meters (3 blocks) or 180 meters (2 blocks) long (generally north-south). An additional row of blocks may have existed on the west side of the town in order to take advantage of the heights of the western area.

This original town plan was then modified during the late Sasanian period (Phase 2a on the fortress). A new north wall was constructed, attached to a greater portion of the fortress, which was used more intensively. The gate and Towers 2, 4, 6, and 8 were situated at the ends of the north-south streets separating the blocks of the town. The second change was in the western area, where a different orientation was introduced. All of these structures, as far as have been excavated, fall rather neatly into a square measuring 120 x 120 meters. These limits seem to form extensions of the central block of the earlier town. Indeed the southeast corner of this square conforms with a surface feature marked on the field plan (see Fig. 2). To what extent this new orientation was adopted throughout the remainder of the town is uncertain (since the orientation of Tower 6 and even the north edge of the podium may be coincidental).

Shiraz and Qasr-i Abu Nasr

If the pattern of occupation, or the scenario, for the site of Qasr-i Abu Nasr presented in this report is even approximately correct, the character of this settlement would have changed markedly during the course of the Sasanian period. What began as a town and small defensive structure, only incidentally incorporating the mass of the fortress, developed into a specialized western suburb, or quarter, and an intensive occupation of the fortress. This suggests a change in the character of the site, the addition of administrative and defensive functions to its role as a population center for the valley. The picture (or bet-

ter, characterization) of Qasr-i Abu Nasr in the late Sasanian period is as an official governmental post, dominated by *mobadhd* administrators centered in the fortress, as indicated by the sealings, and complemented by a possible Christian monastic center in the western area.

There remain two important questions: What did the Arab army of conquest find when it arrived at Qasr-i Abu Nasr and, on a more general but related level, what was the history of early Shiraz, 6 kilometers to the west? The population of the Shiraz valley may have contributed soldiers for the final battle against the Arabs at Nihavand in 642 and almost certainly witnessed the flight of the defeated Yazdigird III to Istakhr and heard his summons for a new army in Fars province. The king fled farther to the east, and the Arab armies soon arrived in the region. According to Baladhuri (ninth century), "Abu Musa and Uthman ibn Abi l-'As joined forces in the latter part of the caliphate of Umar [ca. 644] . . . and conquered Shiraz, which is part of the land of Ardashir Khurrah, on condition that they [the Shirazis] be *dbimmis*, paying the *kharaj* (except those who preferred to emigrate) without any being killed or enslaved" (Murgotten 1924, 130). In other words, the town of Shiraz—a major population, and presumably administrative, center—capitulated without resistance and was treated in the normal manner.

Reitemeyer suggested (1912, 91) that Baladhuri was using the name Shiraz anachronistically, since geographers writing in the ninth and tenth centuries uniformly describe Shiraz as a *misr* (army camp or garrison town), founded by the Arab armies of conquest on the only practical route between Istakhr and Jur, the last two recalcitrant cities in the Sasanian empire (for the geography, see Chapter I). Baladhuri himself noted "in the year 29 [649] . . . all of Persia with the exception of Istakhr and Jur was already reduced . . ." (Hitti 1916, 490; Hinds 1984). Istakhr even claims, with some patriotic pride, that

The city of Shiraz is Islamic and not old; it was the first city to be built in Islam. Shiraz was founded by Muhammad ibn al-Qasim ibn Abi Aqil, the cousin of Hajjaj ibn Yusuf. . . . It was the camp of the Muslims when they attempted to conquer Istakhr and, when they had conquered Istakhr, they settled in this

FIG. 78 Ceramics from Cut 3

	Description	Photograph no.	Accession no.	Comparanda (Figures)
a	greenish cream ware, grit temper	F158.2		19a,b
b	buff ware, traces of red slip, grit and chaff temper	F161.1, 162.1	34.107.49	48b
c	gray ware	F345.1		48b
d	yellow ware, blue-green glaze on interior and exterior			55c
e	yellow ware, pale apple-green glaze	F155.4		26h
f	pink ware, buff slip, dark red paint			19e, 48i
g	gray ware, black slip	(F345.1)		49g
h	pink ware, dark red paint			49i
i	buff ware, red paint	F344.1		56l
j	yellow ware, blue-green glaze, incised line decoration			
k	sandy dark gray ware, 3 raised lines in bottom			51b
l	yellow ware, blue-green glaze			
m	buff ware, light red slip, dark red paint, 6 mm. thick			49p
n	pink ware, buff slip, dark red paint			49s
o	greenish white ware			52e
p	hard gray-buff ware, black slip on exterior and interior rim			
q	greenish gray ware			
r	buff ware			46k
s	greenish gray ware			21n
t	buff ware			47h
u	red ware, buff slip			17d
v	reddish ware, buff slip			43d

FIG. 78 Ceramics from Cut 3

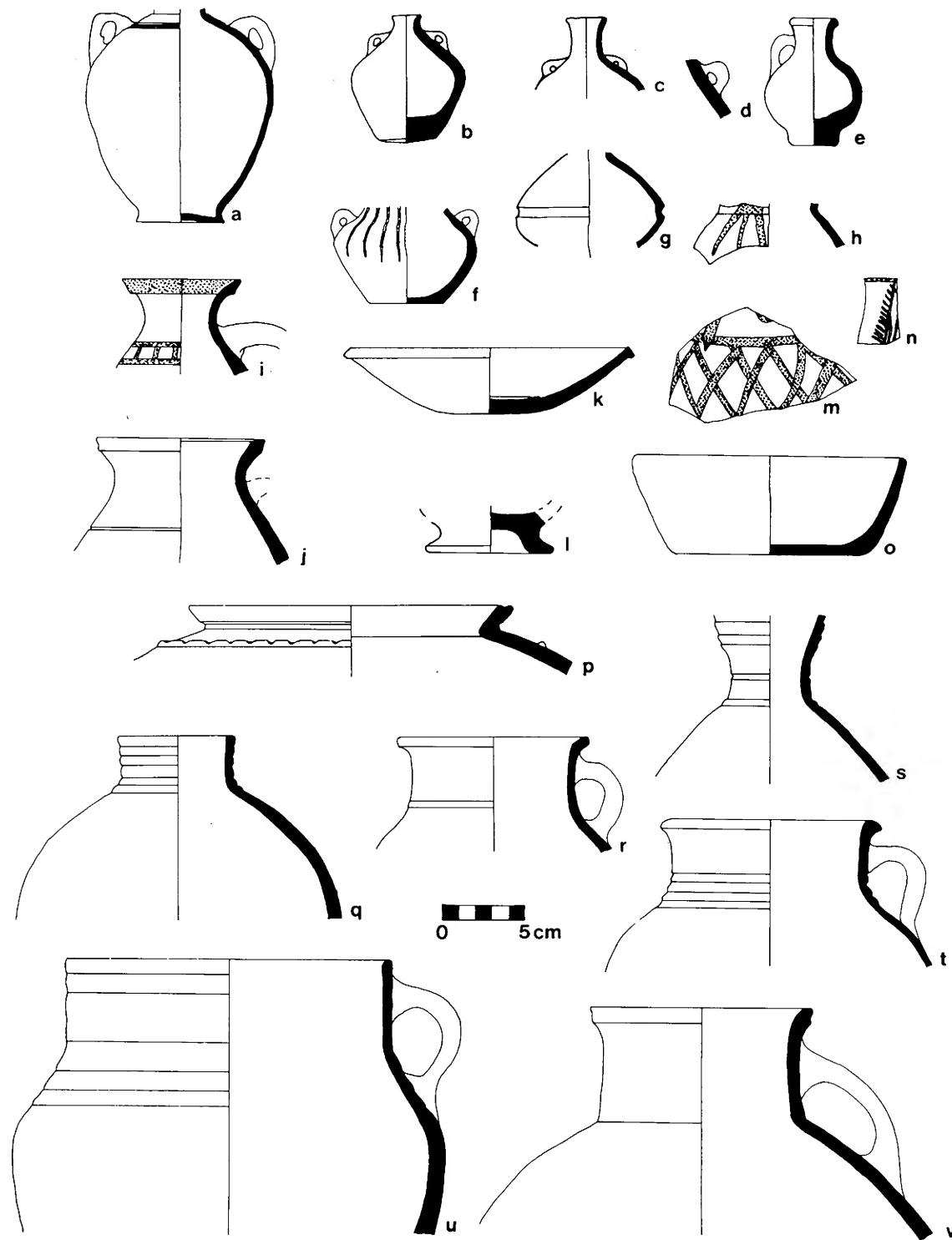
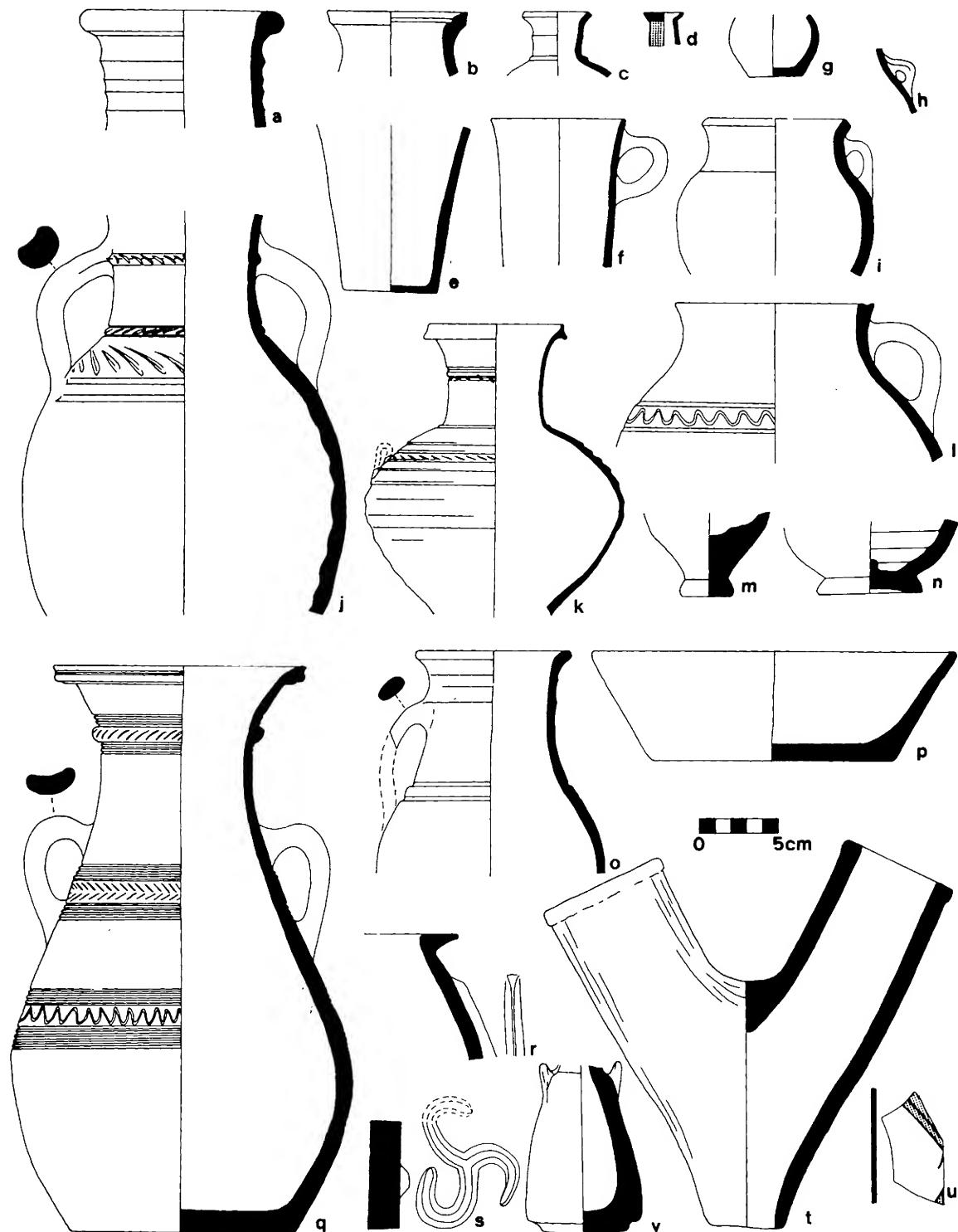


FIG. 79 Ceramics from Cut 4

	Description	Photograph no.	Accession no.	Comparanda (Figures)
a	smooth orange-buff ware			18b
b	yellow ware, blue-green glaze			46d
c	gritty dark gray ware			
d	yellow ware, purple-red paint			
e	fine light gray ware			54k
f	very fine light gray ware			54k
g	buff-pink ware, paint or slip on exterior			54k
h	gray ware, black slip			
i	gritty buff ware, smooth exterior			
j	buff ware, incised, large red grit and chaff temper	F129.1	34.107.37	45e
k	gray ware, grit temper, incising	F317	36.30.37	
l	coarse buff ware, white slip, incising			
m	greenish white ware			
n	greenish white ware, residue in bottom (lamp?)			
o	light gray ware, black slip, grit temper		36.30.55	16f
p	pink ware			51e
q	pink ware, buff slip, incised decoration	F128		
r	red ware, buff slip, appliquéd decoration, diam. ca. 50 cm.	F336.1		18k; 50i (appliquéd)
s	buff-pink ware, appliquéd decoration	F336.2		
t	tan ware, burnished, heavy black grit temper	F342.2	36.30.38	
u	very fine red ware, dark red paint, polished on exterior			49i
v	cream ware, green glaze, grit	F155.3	37.107.46	

FIG. 79 Ceramics from Cut 4



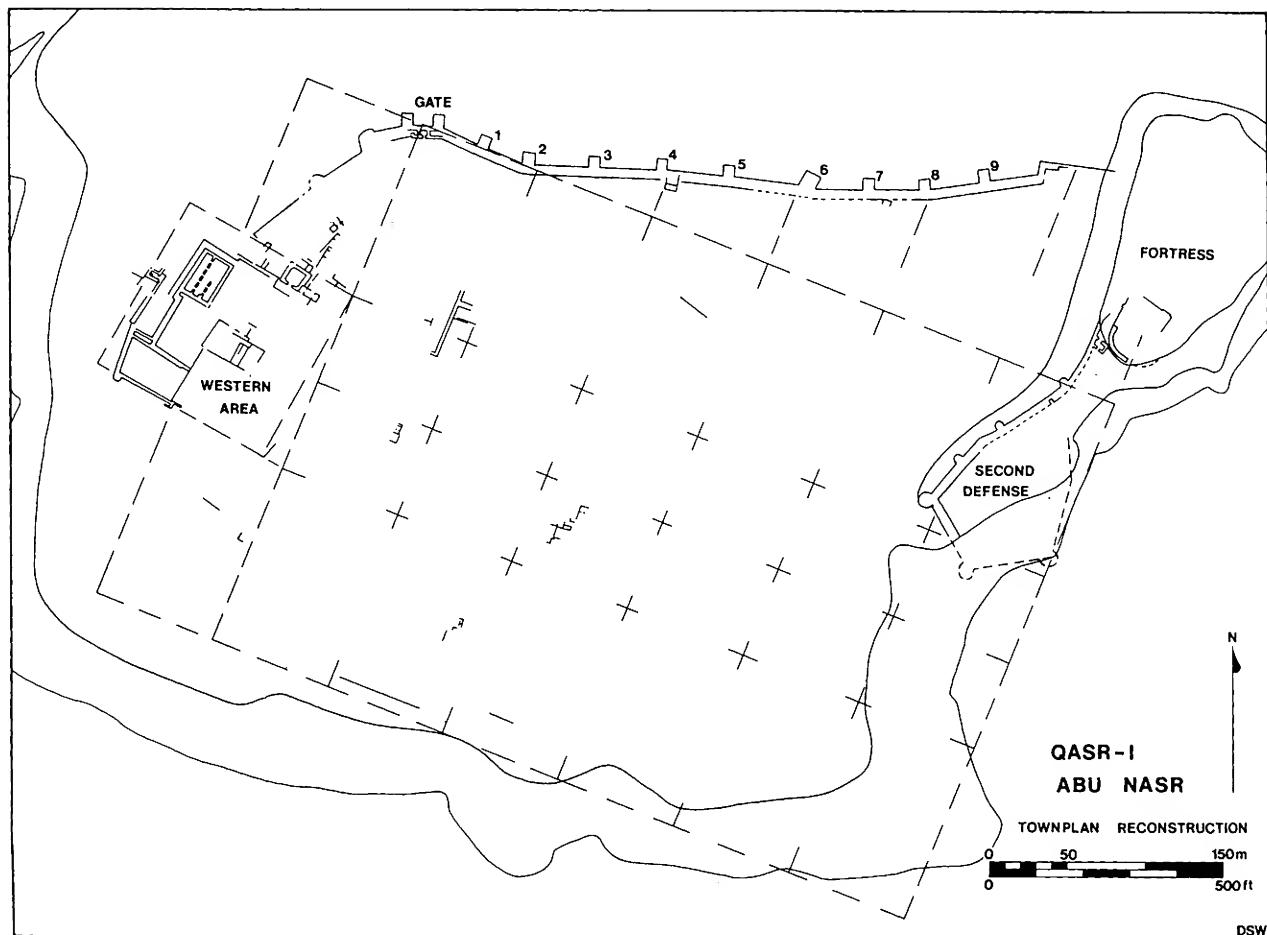


FIG. 80. Reconstruction of the town plan of Qasr-i Abu Nasr

place. And the camp became Fars and they built the city; this was always the location of the stores of the army of Fars, the government bureaus of Fars and the residence of the highest civil and military officials (1967, 124-25).

According to this tradition, Muhammad ibn al-Qasim, cousin of Hajjaj ibn-Yusuf, founded the city of Shiraz in 693/4, or 684 according to another source. Other traditions indicate a brother of Hajjaj, Muhammad ibn-Yusuf, as founder of Shiraz (Le Strange 1919, 113). In either case the influence of Hajjaj is clear; it was this great governor who, in the course of consolidating power in Iraq, had founded the garrison town of Wasit about 690 (Le Strange 1905, 249). (Most of the *amsar* date to the period of the conquest, 637-41; e.g., Mosul, Basra, Kufa.)

There exists a second tradition, however, that the city of Shiraz was built upon an older foundation (Huart 1934, 376). Qazvini, writing in a much later period, names that foundation as Fars (Le Strange 1919, 112). This is not necessarily a contradiction, since all of the *amsar* in Iraq were founded in the vicinity of an older settlement, either a large town or even a small village. The question which may be posed is the location and relationship of the preconquest town referred to as Shiraz and Shiraz between the conquest and Muhammad al-Qasim (i.e., 644-94) to Umayyad Shiraz (694-750).

Little archaeological research has been undertaken within the modern city of Shiraz and there appears to be no positive evidence of pre-Umayyad or even pre-Abbasid occupation of the city. The city in which Istakhri took such pride was evidently largely the re-

sult of development under the Saffarids (868–933) and the Buyids (933–1048, during Istakhri's time). One possible method of arriving at an idea of earlier Shiraz and its setting is an examination of the place names mentioned in the tenth-century descriptions. There are two accounts of the city gates of Shiraz, that of Muqaddasi in the tenth century (1967, 430) and that of Qazvini in the fourteenth century (Le Strange 1919, 113). The Istakhr gate would have been located on the north in both accounts; then Muqaddasi's Tustar (a city in Khuzistan) and Bandastanah on the northwest and west are to be identified with Qazvini's Darak (for nearby Kuh-i Darak) and Bayda (for the town of Baiza) in the same directions respectively. Moving to the southwest and south, Muqaddasi has the gates of Ghassan (for the Arab tribe?) and Sallam where Qazvini has the Kazerun and Sallam gates (names still used in Shiraz).

Muqaddasi called the southeast gate opening onto the length of the plain Kuvar, for the town in this direction on the way to Jur. Kuvar was replaced by Kuba (Fana or Qana) in Qazvini's list. Of these variant readings in Qazvini, one is tempted to choose Fana as an abbreviation of Kard Fana Khosrow, the Buyid town developed in Istakhri's time but only a ruined memory by the time of Qazvini. This town is generally assumed to have been southeast of the city. Qazvini then adds a new gate on the southeast or east, called appropriately Bab-i Now (New Gate). The gate to the east or northeast was called Mandar (or Pandar) by Muqaddasi and the Bab-i Daula by Qazvini (Gate of Government; or perhaps the name is in remembrance of Adud al-Daula, the builder of Kard Fana Khosrow). The gate of Mandar located in the direction of Qasr-i Abu Nasr will be considered below. The northeast gate was Mahandar for Muqaddasi and the Bab-i Sa'adah (the gate of Felicity) for Qazvini. The name Sa'adah may be a corruption of Sa'di or Sa'diyah, whose tomb and zawiya was, and is, located in that direction.

The earlier name for this northeast gate (before Sa'di) was Mahandar, or Pahandez (the broad fort), according to Ibn al-Balkhi (Le Strange and Nicholson 1921, 317; and the *Farsnameh Nasiri*, Hasan-i Fasa'i n.d., 333). Another corruption is Fehender, better known as Qal'at Fehender (Schwarz 1969 [1910], 48 n. 1). Qal'at Fehender (or Fender or Pender or Bandar) is often mentioned by travelers in modern

times (Ouseley 1821, 29; Sykes 1902, 322; and Schwarz 1969 [1910], 48 n. 9; among others). The *qal'at* or fort, is uniformly described as being near Shiraz, close to the tomb of Sa'di (Qazvini calls it Kut Sa'di; Le Strange 1919, 113), and is said to be distinguished by two (or sometimes three) deep wells cut into the rock. The *Hudud al-Alam* of the tenth century contains the statement that near Shiraz is "an ancient and very strong citadel, called Qal'at Shah Mabadh, and in it are two venerated fire-temples" (Minorsky 1937, 126). The site of this fort has not been investigated archaeologically, although Hauser was shown some pottery said to be from it which seemed Sasanian to him. He records in his field notes the following observations on collections from "Kala-i-Bandar," presumably Qal'at Fehender or Shahmobadh: "Exactly the same pottery as from Qasr-i Abu Nasr. 1. unglazed buff and greenish pieces with a) cut, b) combed decoration. 2. typical blue glazes and blue and black. 3. typical cobalt or turquoise on white ground, one like our 'Chinese-like' pieces. 4. One piece Shah Abbas imitation blue and white porcelain." From these descriptions one might propose a late Sasanian and certainly a Buyid (ninth- to tenth-century) occupation for this site. The fort may have been restored by Adud al-Daula or another Buyid (Amid al-Daula; Le Strange 1912, 317 n. 1) and is probably the location of the late fourteenth-century palace by the name of Pahandez built by the Muzaffarid Shah Shuja. But Istakhri stated that "belonging to Shiraz is an old fort (*quhandez*) called Qal'at Shah Mabadh" (1967, 116). It is in a misreading of *quhandez* that one should probably identify the origin of Mahandar and subsequent corruptions (this situation is used by Shahbazi as an example of the difficulties of manuscript reading for place names; 1977, 207). That Shah Shuja also had a mint called Bandar, perhaps a poor reading of Pahandez, may be another example of this lexicographic problem. More important, the identification of the fort close to the tomb of Sa'di with Qal'at Shahmobadh may be assumed (Schwarz 1969 [1910], 44 n. 8); Qasr-i Abu Nasr is a distinct location (and not Qal'at Shahmobadh, as in Frye 1973, 2).

The importance of the location of Qal'at Shahmobadh is that it allows the placement of one of the *tassuj* of Shiraz (Fig. 81). Istakhri names thirteen of these land divisions for the plain of Shiraz (1967,

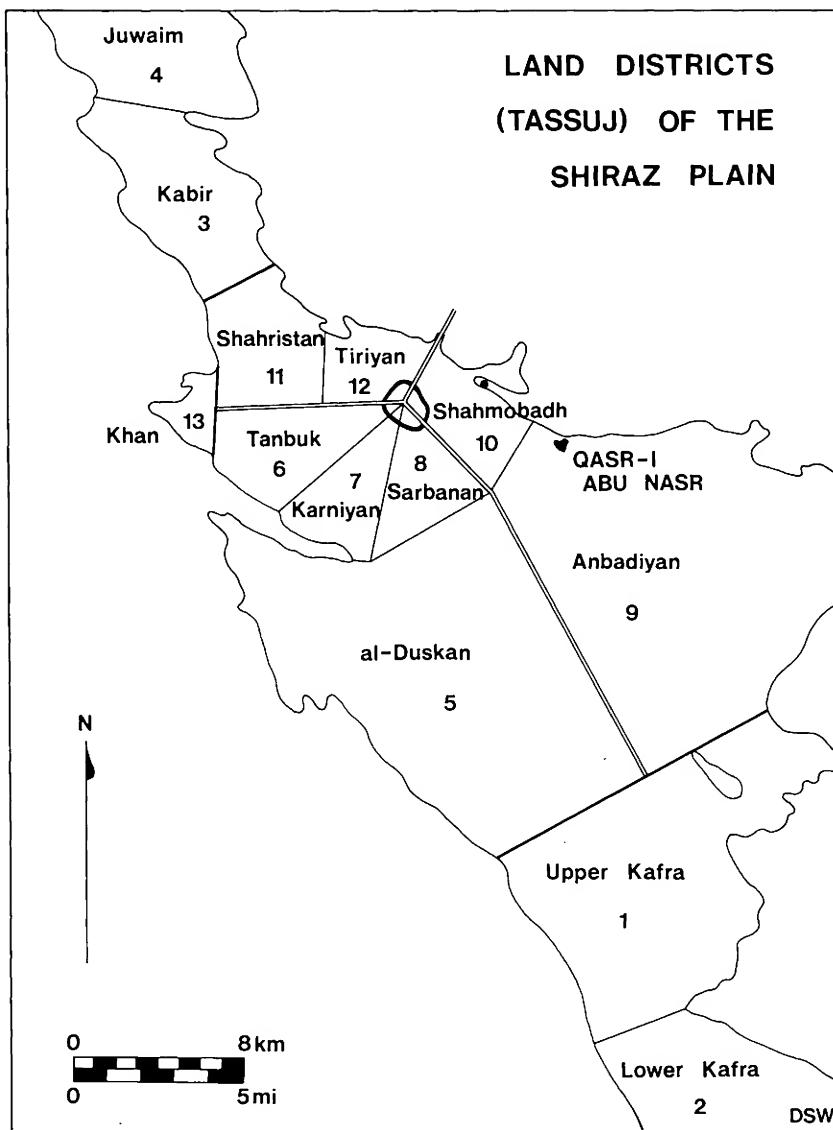


FIG. 81. Reconstruction of the land districts of the plain of Shiraz

104). Upper Kafra and lower Kafra may be placed at the southeast edge of the plain; Juyum and perhaps Kabir are at the northwest extremity of the plain. Istakhri provides these further notes: "In these districts are two Friday mosques; one is in Shiraz and certainly this was a Muslim foundation on the land of the *tassuj* of Shahmobadh, Tiriyan, Sarbanan, Tanbuk, and Karistan [i.e., Karniyan]. The mosque and bazaar belong to Shahmobadh and the government buildings lie in the *tassuj* of Sarbanan. The other Friday mosque is located in Juyum [i.e., Juwaim]" (1967, 104). This information, together with the location of Shahmobadh, provides a fairly

certain picture of the organization of the plain of Shiraz. Two additional factors have been considered: first, that early Islamic cities always placed the Friday mosque and governmental buildings beside one another. Thus the *tasasij* of Shahmobadh and Sarbanan must have been adjoining. Second, that early Islamic geographers tended to work counterclockwise, as has been demonstrated in Muqaddasi's description of the city gates. Finally one may assume that the order in which Istakhri treats the names is not random.

He begins with Upper Kafra (1) and lower Kafra (2) at the southeast edge of the plain and then shifts

to Kabir (3) and Juwaim (Juyum; 4) at the northwest extremity. Next he treats the southern part of the town and plain, beginning with the rural tassuj of al-Duskan (5) and followed by three tasasij with "urban" land, Tanbuk (6), Karistan (7), and Sarbanan (8). The northeast section of the plain has the rural tassuj of Anbadiyan (9) and the urban tassuj of Shahmobadh (10). The northwest section likewise has a rural tassuj of Shahristan (11) next to the urban tassuj of Tiriyan (12). Finally he remembers the southwestern tassuj of Khan (13), which, as the name implies, should be on a major road, and there is still the village of Khan-i Zinan on the Kazerun road running west from Shiraz. The divisions of southern, northeastern, and northwestern sections of the plain are based on the roads to Jur, Istakhr, and Kazerun. Further, if Karistan is Karniyan, the fire temple in the new city was located next to the government buildings for protection. It is also possible that the tassuj of Shahristan may have been the location of a pre-Islamic settlement, judging from the pattern of Isfahan, where Jayy or Shahristan was the original town (Golombok 1974, 21).

This long discourse is not intended as a preamble for a study of the history of Shiraz, as desirable as such a study might be, but as an aid in the determination of the district and possible ancient name of the site of Qasr-i Abu Nasr and the identification of Qasr-i Abu Nasr's relationship to the city of Shiraz. The tassuj in which Qasr-i Abu Nasr is located is Anbadiyan. As one will undoubtedly realize by now, the manifold possible readings of the tassuj names have been heretofore ignored. The reading Anbadiyan, which follows the reading of Schwarz (1969 [1910], 44) as do most of the other tassuj names given here, agrees with de Goeje, who, however, notes that Ouseley read the name Abandiyan while another manuscript has the name written Amriyan Amrban (1967, 104, K). The suffix *-ijan* can be substituted for *-ijan*, *-igan*, or *-ikan*. Unfortunately neither Anbad nor Aband has an identifiable meaning or geographical association. Assuming further lexicographic distortions, one might read Anbarikan or Ambadhiyan and many other possibilities. Such a name might be related to Ptolemy's *βαρθίνα*, which Herzfeld identified with Qasr-i Abu Nasr (1907, 17), particularly with the reading An-badhiyan. Another possibility stems from the meaning of *anbar* as

storehouse (treasury?), although the present spelling is incorrect. One further possibility concerns the fire temple in the village of Barkan, which was named Minubad (or Masuban; Istakhri 1967, 119). This is supposed to have been located about one mile (1.5 kilometers) north of Shiraz (Schwarz 1969 [1896], 54). It may be noted, however, that among the textile products of Kard Fana Khosrow was Barrakan cloth, possibly associated with this village (or conversely, the village with Kard Fana Khosrow; Schwarz 1969 [1896], 50). Again a lexicographic similarity between Minubad and (A)nbadiyan suggests a possible relationship among these fragments of topographic information.

The origin of the name "Shiraz" is often suggested to be Tirazziš, an Achaemenian town or castle mentioned in the Persepolis fortification tablets (Frye 1973, 1). This name is not testified further until the form found on the Qasr-i Abu Nasr sealings. In his discussion of the transformation of the name for Persepolis near Istakhr from Parsa to Takht-i Jamshid, Shahbazi mentions that the word for fortress is often written *srk* or *srw* (1977, 198), and he identifies this "castle-like and labyrinthine" structure at Persepolis with the Treasury. By the early Sasanian period the name Parsa seems to have been replaced by Sat-sutun (one hundred columns) and, still later, by Takht-i Jamshid (the throne or palace of Jamshid). This latter name is explained by the association of the *saruka* (treasury) with the huge underground (*var*) castle of Jamshid (Yam), the legendary hero of the *Shahnameh* (Shahbazi 1977, 202; Herzfeld 1930, 64–65).

This interpretation by Shahbazi has important implications for the identification of Qasr-i Abu Nasr. The *Bundahishn* states that "the *var* built by Yam is in the middle of Pars, in *slub'k* [Sarupaka]; thus they say: the Yam-built (*var*) is under Mount Yamkan." Shahbazi argues, in opposition to Gershevitch (1974), that Yamkan cannot be identified as the mountain behind Persepolis, and asks, "Could it have been the designation of the mountain on the edge of the Lake Jamkan (Maharlu) situated to the east of Shiraz?" (1977, 203). The location of the *var* in the middle of Pars would accord well with the centrality of Shiraz during the period of the final revision of the *Bundahishn*, as stressed by the medieval geographers.

The *var* or castle was in *sarupaka* or *saru[pa]ka* (Sruba; West 1880, 120 n. 4), a place name, under Mount Yamkan (Gershevitch 1974, 67). The name Frye read as Shiraz on the sealings from Qasr-i Abu Nasr is written *syl'cy* and may be a modification of *saruka*, the word for "fortress" in the Persepolis texts. Thus, if the Mount Yamkan mentioned in the *Bundahishn* is the mountain located east of Shiraz, then this collection of Zoroastrian materials may be saying that the *var* built by Yam was in the city of Shiraz. But the description as a castle/fortress and treasury, and the pre-Arab conquest date of the reference, make it possible that Shiraz is here the name not of modern Shiraz but of modern Qasr-i Abu Nasr. If this is true, two possibilities present themselves: that the original name of Qasr-i Abu Nasr was Saruka (later identified as the *var* of Yam, *var-i Jamkand*) or that the name Parsa, with its associated *saruka* (*sarupaka*; fortress), was transferred to Qasr-i Abu Nasr from Persepolis during the late Sasanian period or earlier, when the ruins of Persepolis acquired more descriptive or legendary names. (Qazvini recounts the legend of a city called Fars located at Shiraz; Le Strange 1919, 112).

Publishing a late Sasanian papyrus from Egypt, Harmatta discusses at length the word *syrk*, which occurs at the beginning of the papyrus in the combination *gwend* (troop) *syrk* (1976). When de Menasce first published the papyrus, he concluded that the word indicated a place name, Sirkos, with one attestation (1953, 190). Harmatta, allowing de Menasce's reading as a possibility, prefers to read the word *sglk*, traced from the root *sagr* (satiate; *sagrag*, provision) and translated the phrase as "troop supplied with provision," rather than de Menasce's "troop of *syrk*." Following de Menasce one might connect *syrk* with the older root *saru[pa]ka* (treasury/storehouse) and then, possibly, identify the place name as Shiraz. This would of course imply near-contemporaneous variants in writing the name "Shiraz," although these variants would have been separated by thousands of miles (raising the fascinating possibility of a troop from Shiraz operating in Egypt during the Sasanian occupation). (Other possible variants are "Sarak" in Gignoux and Gyselen 1982, 28, and "Sirkān" in de Menasce 1964, 154; this latter name opens another etymological line, deriving from the tribal name "Siraci" [Shirak], perhaps explaining the

connection between Qasr-i Abu Nasr and Nihavand; see Minorsky 1943, 79-80.)

Fars is a name that must be considered for Shiraz and Qasr-i Abu Nasr in early Islamic times. On the one hand the mint of "Fars" is known from issues beginning in 817 and continuing almost uninterrupted until 911, that is, during late Abbasid and Saffarid rule (on this mint, see Miles 1960, 124-25). The mint of "Shiraz," on the other hand, issued copper coins in 747 (Miles 1959, 47), 754, 807, and 847, then silver dirhems under the Saffarids (882-904), and later, especially under Buyid rule (933-1044). There is thus an overlap between the two mints, but perhaps significantly the pre-Saffarid coinage was distinguished by metal, with copper at Shiraz and silver at Fars. These dual mints may have had discrete functions or may have been located in two distinct places. It is possible that one of these mints was located at Qasr-i Abu Nasr and the other at modern Shiraz.

The specific identification of the mints may be historically reconstructed from the archaeological and documentary evidence. The first period bearing on this question is the late Sasanian occupation, when the sealings from Qasr-i Abu Nasr indicate that the fortress was an administrative center for the region as part of Ardashir Khurrah. The place name of Shiraz prevalent on these sealings indicates either Qasr-i Abu Nasr itself or another nearby place (perhaps Shahristan?). This latter alternative leaves Qasr-i Abu Nasr without a name and presumes the existence of another town for which there is no other evidence. In 644 "Shiraz" capitulated peacefully to the conquering Arab armies. This statement would not contradict the identification of Shiraz with Qasr-i Abu Nasr; although Qasr-i Abu Nasr was a fortress town, the town or even the fortress may have been defenseless at this period. The only evidence of destruction at Qasr-i Abu Nasr is the two burnt rooms where the sealings were found (which would not have survived had they not been accidentally fired). Frye has suggested that the presence of one sealing with the Arabic *bismillah* dates the collection to the seventh century (1973, 58, D195). Thus the destruction of the record rooms probably should not be associated with the Arab conquest.

The second distinct period in the history of the name Shiraz (644-684/694) was the time of the con-

solidation of the conquest and the organization of the Islamic province. There is some evidence for Arab colonization and development of settlements adjacent to older Sasanian urban centers (Whitcomb 1979a), but the initial settlement was in the form of camps for the armies. Information about the establishment of the camp at Shiraz is scarce. The development may have followed the same pattern as is seen in the next plain to the north, the Marvdasht plain. There the general rebellion of 659 brought Ziyad ibn Abihi to Istakhr, where "his administration became so famous as to recall to Persian memories the happy age of Nushirwan" (Muir 1968, 407). With his troops from Basra he built a fortress known as Qal'at Ziyad near Baiza (Bayda). Baiza, 45 kilometers northwest of Shiraz, was near the Sasanian town of Nisa, which boasted a renowned fire temple (Muqaddasi 1967, 432).

The influx of Arab colonists from Basra suggests that the land around Baiza was not *kharaj* land but became *qati'a* (land grants). "Before the town [of Baiza] there stretches out a fine meadow-land, 10 leagues in length by 10 leagues in width, and in all the country there is none other equal to it" (Ibn al-Balkhi, as quoted by Le Strange 1912, 30). This springfed region was most suitable for the pasturage necessary for the Arab tribes (Lambton 1965, 360–61; Whitcomb 1979a, 108). The camp at Shiraz was probably located on open ground in the plain, where pasturage rather than cultivation was prevalent—that is, nearer the site of the modern city than Qasr-i Abu Nasr.

Most of the Arab-Sasanian coins of this period found at Qasr-i Abu Nasr (about one-quarter of the total coins) were found on the fortress. If the fortress was the "Shiraz" of the sealings and the town Baladhuri noted had capitulated, what was the name of the camp? In the absence of positive evidence, there are two possibilities: the "camp of Shiraz," or an unsupported though attractive possibility, the "camp of [the army of] Fars." It is at this point that details of the history of Arab colonization and the process of the foundation of an Islamic settlement (and ultimately its conceptual nature) would be helpful. The *amsar*, or garrison cities, have been studied from Reitemeyer (1912) to Kubiak (on al-Fustat, 1982), but little reliable archaeological information has been available (Whitcomb 1979a, 101). Therefore the

contrast between these camps (even with planned *khittabs* or collective holdings of individual clans or tribes) and the later *muhandesin* or geometrically planned cities, such as Baghdad or Samarra, is probably inaccurate. The founder of modern Shiraz, whether it was Muhammad al-Qasim or Muhammad ibn-Yusuf, was continuing a series of secondary urban developments (including Wasit, Ahwaz [Askar Mukram], and Qumm) well after the uncertainties of the conquest (685–704; Herzfeld 1921, 163). The development of urban planning, seen in these later *amsar*, can be compared to the development of formal mosque architecture; the early sanctuaries, open and simple structures, were always *ikhatta* (traced or marked out) and now became *bana* or *ammara* (built of stone or brick).

This early camp city of Shiraz was probably not particularly elaborate, as Istakhri suggests. A third period may thus be defined as the almost two centuries from the foundation of modern Shiraz in 684/694 to the advent of the Saffarids in 867/868, who embellished the city (e.g., by building the Masjid-i Atiq) to serve as this dynasty's capital. During this third period, the occupation at Qasr-i Abu Nasr is exemplified by the structures of Phase 2b on the fortress (although these may be slightly earlier), including coins and perhaps even some of the sealings. It is clear that this period, during which Shiraz developed, witnessed the abandonment of Qasr-i Abu Nasr. The last buildings on the fortress are few but substantial (e.g., the Central House), evidence not so much of decay as perhaps a specialized role. One might argue that, with the transfer of population, the name "Shiraz" also became associated with the new Arab governmental center.

The embellishment of modern Shiraz by the Saffarids was continued, after a short hiatus, by the attentions of the Buyids, particularly Adud al-Daula. We thus return to the problem of Kard Fana Khosrow, discussed earlier as near Qasr-i Abu Nasr and with which the "Achaemenian" pavilion in the western area may have been associated. From the descriptions of the geographers, one sees that Kard Fana Khosrow was a new settlement with palaces and estates of many courtiers as well as a town for specialized textile workers. Further, the site held warehouse facilities and its own mint. Thus the capital in the tenth century had two mints: that of Shiraz, the gov-

ernmental center, and that of Kard Fana Khosrow, the industrial-trading center (Whitcomb 1976; 1979a, 70, 140). The latter mint, like other mints located in entrepôts and centers of production, served to facilitate long-distance trade and the structure of the early Islamic textile industry; local currency was necessary since available coins represented the capital investment for partnerships (Whitcomb 1979a, 140).

This phenomenon of dual commercial and administrative urban centers may parallel the *karum*, attested in very early historical sites (M. T. Larsen 1976, 227–36). This dual organization is also exemplified in later historical situations such as the Italian colonies in Byzantium or the British East India Company in India. A yearly festival was held in Kard Fana Khosrow (beginning in 965) lasting for a week from March 27; a similar festival was also held in Isfahan (Gaube 1979, 69). This date was determined according to the solar calendar and seems designed to key into the Zoroastrian (Sasanian) New Year's celebration (Now Ruz). While the dancing and feasting are stressed in the description, the location in this commercial center suggests that a yearly fair may have been the primary purpose. A cycle of yearly fairs seems to have characterized the commercial system of pre-Islamic Arabia (Serjeant 1954, 126; Whitcomb forthcoming a), in which Persian (Sasanian) merchants are said to have participated (Shoufani 1973, 156). It should not be surprising to see vestiges of this pattern emerge in early Islamic Iran, particularly with the reordering of patterns during the Abbasid period.

Returning to Istakhri's description of the city gates of Shiraz, one finds on the eastern side the gate of Qana (or Fana) leading to Kard Fana Khosrow, the gate of Mahander (Fehender, Pahandez/Shahmobadh) and, between them, the gate of Mandar, which should lead to Qasr-i Abu Nasr. It is reasonable to see Mandar as a corruption of Bandar, which has the modern meaning of "port" (as in Bandar Abbas); a secondary but no less important meaning is a "chief-place, a place of commerce" (Dozy 1927, 117) or "commercial town" (Hava 1970, 47). The word *port* may derive from the Latin *porta* (gate), as a locus of trade as well as a point of passage. The approximate equivalent in Arabic for *bandar* is *mina*, which may be related to the Himaritic *tmn*, the marketplace or trading center in the Qataban mercantile code (Bee-

ston 1959, 15). The word *mina* may also be related to *muna* (stores, provisions) and *muni'a* (inaccessible, fortified), thus bringing us back to the two meanings attributed to *saruka*, a storehouse/treasury and a fortified place.

More to the point, however, is the idea that the name Bandar as a trading center can be associated with Qasr-i Abu Nasr. As presented in the hypothetical reconstruction, originally both the army camp and the fortified town played roles in the governmental administration of the province: the camp called Fars was the military administrative center for the province, and the commercial center, with its still-intact regional administration by the mobadhs, was at the fortress of Qasr-i Abu Nasr, called Shiraz. Later, with the coalescing of both these functions in the new city, two mints were still useful: "Fars" for the administrative functions and "Shiraz" for the commercial needs, which, as might be expected, eventually took precedence. The commercial site of Qasr-i Abu Nasr, perhaps only a memory and therefore referred to as Bandar, was replaced by Kard Fana Khosrow in a continuation of this tradition. This presents an intriguing picture of a fundamental transition in the history of the province with broader ramifications for Islamic civilization and the process of urbanization in general. Unfortunately Qasr-i Abu Nasr is only one-half the picture and poses questions for further research on the history of Shiraz.

The excavations at Qasr-i Abu Nasr have provided glimpses into aspects of Iranian history that certainly raise the efforts of the excavators to a value quite unexpected by them. The last transition experienced by this site has an historical value, unfortunately well beyond the capacity of the relevant documentary evidence so far discovered. The initial settlement of the site, the foundation of the late Parthian or early Sasanian town, must have occurred during another, even more obscure period of transition in Iranian history. The artifacts show, though none too clearly, the influence of the late Classical world, and, although planned towns of this period may have had a confined regional outlook, they could nevertheless have been responses to broader patterns of transition. The stresses within the late Sasanian empire are also reflected in the architectural and artifactual changes at Qasr-i Abu Nasr. The foundation of a church or monastery on the edge of the town is no doubt indic-

ative of the religious ferment in the Sasanian world during these times. Finally, after Shiraz had replaced this town and only ruins remained, the Buyid pavilion was built, probably as part of Kard Fana Khosrow, and the Muzaffarid khanagah was established, indicating a continuity of both the commercial and religious aspects of the site. Indeed in the spring the population of Shiraz still picnics between Qasr-i Abu Nasr and Barm Dilak.

The broader generalizations about Qasr-i Abu Nasr, whether concerning the process of urbanization or specific historical developments, are necessarily

premature and highly speculative. The corpus of data from these excavations is unique evidence, in that it has not been, and could not possibly be, duplicated in other excavations. As with all archaeological research, these excavations present a focal point for comparisons and a beginning for ideas, both historical and theoretical. The excavations of the 1930s, and indeed many more recent excavations, remain unpublished in part because of the daunting magnitude of the explorations that they unfold. Certainly the excitement of discovery is not limited to the removal of the earth.



top: PL. 55. General view of the western half of the tomb field
bottom: PL. 56. Stone Tomb 1, before excavation



top: PL. 57. Stone Tomb 7, with the entrance visible

bottom: PL. 58. Stone Tomb 4, with roofing stones partially removed



top: PL. 59. Stone Tomb 8, with artifacts found in the northwest chamber

bottom: PL. 60. View of the second defense, looking south from the stone bastion



top: PL. 61. Wall of the second defense with two round towers and loopholes
bottom: PL. 62. East end of Cut 4; Cut 2 is visible against the side of the fortress



top: PL. 63. View of Cut 4A looking northwest

bottom: PL. 64. Remains in the northeast end of Cut 3

Appendices

APPENDIX A: Locations of Sealings

The following locations for the discovery of sealings, with the date of the discovery in 1933-34, gives an impression of the context of these important artifacts. Unfortunately the description of the sealings is probably too cursory for the identification of individual sealing drawings; no record seems to have been kept of this correlation.

No.	Description	Location	Date
1	small clay impression of animal and parts of two seals with Pahlavi inscription	Arab, B	10/11/33
2	half of a clay impression with filleted ibex, with late Sasanian coin n. 42 or 43	Akbar, A, E side	11/11/33
3	clay seal impression, 3 cm. in diameter	A	19/11/33
4	many seal impressions (crystal head, Fig. 73d; bronze hoof, Fig. 62m)	Burnt room in center	19/11/33
5	impression of lion couchant	Husein Ali Agha wall, N side B	4/12/33
6	large red clay impression	Akbar, next to Ismail burned room	5/12/33
7	kneeling gazelle	room, N side	7/12/33
8	pinkish clay impression with	Husein Ali Agha, near plastered wall, 2d level N side	7/12/33
9	broken clay impression with camel and	Museih room, N Side	15/12/33
10	impression of winged lion	room with piers, Central House	16/12/33
11	clay impression with Ardashir inscription	Ibrahim, near NS wall, E side	19/12/33
12	1) a camel, 2) Ardashir inscription, 3) humped bull, 4) two standing lions	room with armor on floor	5/1/34
13	1) medium winged horse with	Akbar, NE side	5/1/34
14	four clay seals, impressions of middle-sized horse	Ali Masum Ali, W end of Cut 1	14/1/34
15	black seal impression with one oblong and 5 oval impressions	Akbar, plaster doorway to fortress	14/1/34
16	broken clay seal of ram or ibex with streamers	Akbar, plaster doorway to fortress	15/1/34
17	part of clay seal with Pahlavi inscription in 1.8 cm. circle and 2 small impressions	Abbas Hashimi, N side fire altar	18/1/34
18	fragment of clay impression with Ardashir inscription	Akbar, entrance stone wall	19/1/34
19	ibex with streamers, with one other small impression	Safar room, N side	25/1/34
20	broken half of black clay of cross-legged camel	Akbar, plaster wall at entrance	25/1/34
21	stag's head above wings	Akbar, plaster wall at entrance	14/2/34
22	pinkish clay impression: ibex on top; 2 small seals below	Hajji Ali Agha, E end Cut 1	7/3/34
23	large impression with camel and inscription, on side several of 2 geese in a row.	Akbar, town near entrance	11/3/34
24	small impression of walking lion; two clay impressions, one full face with inscription; large Ardashir inscription	Abbas Hashimi room	25/3/34

APPENDIX B: Artifacts from Qasr-i Abu Nasr in The Metropolitan Museum of Art

Figure	Description	Photograph no.	Accession no.	Published
12n	stone, black; fragment of parapet	A41-44, A192-93	33.175.1	<i>BMMA</i> I, fig. 1; <i>BMMA</i> II, 118-19; Ouseley 1819-23, vol. 2, pl. 15
20i	pottery; jar incised	A68	33.175.2	<i>BMMA</i> I, fig. 6
19j	pottery; juglet	A71.1	33.175.3	
17a	pottery; jar	A71.4	33.175.4	
18l	pottery; jar	A73	33.175.5	
7of	shell; pendant	F548.18	33.175.6	
16e	pottery; jar	A77	33.175.7	
24u	pottery; beaker, glazed	A80	33.175.8	
26h	pottery; lamp, glazed shell; inlay shell; inlay (12 fragments)	A81	33.175.9 33.175.10 33.175.11 (12-36 nos. not used)	
32D	plaster; ventilator window	A84	33.175.37	<i>BMMA</i> I, fig. 7; Frye 1973, fig. 11
24n	pottery; bowl, glazed	A89.1, 90.1	33.175.38	
24p	pottery; bowl, glazed	A89.2, 90.2	33.175.39	
24e	pottery; bowl, glazed	A92.1	33.175.40	
24f	pottery; bowl, glazed	A92.2	33.175.41	
24c	pottery; bowl, glazed	A92.3	33.175.42	
24a	pottery; bowl, glazed	A92.4	33.175.43 (44-48 nos. not used)	
24h	pottery; bowl, glazed	A105	33.175.49	
74j	pottery; bowl, glazed bronze; bracelet bronze; bracelet bronze; bracelet	A74	33.175.50 33.175.51 33.175.52 33.175.53	
64cc	bronze; key	A111	33.175.54	
61o	bronze; ladle	A15, 111	33.175.55	
65u	bronze; spoon	A11, 111	33.175.56	
65y	bronze; spoon bronze; pin bronze; pin bronze; pin	A11, 111	33.175.57 33.175.58 33.175.59 33.175.60	
20a	pottery; pitcher, glazed	A113.2	33.175.61	
24s	pottery; beaker, glazed	A113.3	33.175.62	
25z	pottery; bowl, glazed	A114.2	33.175.63	
24b	pottery; bowl, glazed	A114.4	33.175.64	
24q	pottery; bowl, glazed pottery; bowl, glazed	A116.1	33.175.65 33.175.66	
16a	pottery; jar	A122.1	33.175.67	
20b	pottery; jar, incised	A125.3	33.175.68	
16d	pottery; juglet pottery; juglet	A126.2 A127.1	33.175.69 33.175.70	
19i	pottery; juglet	A127.4	33.175.71	
16h	pottery; juglet	A129.1	33.175.72	

APPENDIX B: Artifacts from Qasr-i Abu Nasr in The Metropolitan Museum of Art (cont'd)

Figure	Description	Photograph no.	Accession no.	Published
20h	pottery; jar	A129.3	33.175.73	
21b	pottery; juglet	A130.1	33.175.74	
	pottery; juglet		33.175.75	
21a	pottery; juglet	A130.5	33.175.76	
	pottery; juglet		33.175.77	
			(78 no. not used)	
20f	pottery; pitcher	A133.3	33.175.79	
20g	pottery; juglet	A134.1	33.175.80	
17d	pottery; jar	A135.3	33.175.81	
20e	pottery; jar	A138	33.175.82	
23l	pottery; bowl, spout	A140.2	33.175.83	
			(84-89 nos. not used)	
74e	shell; ornament	A159.10	33.175.90	
71l	shell; ornament		33.175.91	
71k	bone; button	A160.1	33.175.92	
	bone; button	A160.5	33.175.93	
	ivory; pin		33.175.94	
	glass; button (bead)	A160.4	33.175.95	
21p	pottery; juglet, incised	A156.2	33.175.96	
24l	pottery; bowl, glazed		33.175.97	
71g	ivory; button	A160.10	33.175.98	
	stone; seal		33.175.99	
67a	stone, black; palette		33.175.100	
74a	pottery; lid	A166	33.175.101	
26e	pottery; lamp, glazed	A169.3	33.175.102	
	pottery; lamp, glazed	A169.4	33.175.103	
26f	pottery; lamp, glazed	A169.8	33.175.104	
26d	pottery; lamp, glazed	A169.9	33.175.105	
26b	pottery; lamp	A169.10	33.175.106	
26a	pottery; lamp	A169.11	33.175.107	
26c	pottery; lamp, glazed	A169.12	33.175.108	
	shell; 5 cowry beads		(109 no. not used)	
	carnelian; 7 beads		33.175.110	
	stone; 10 beads		33.175.111	
	pottery; 24 glazed beads		33.175.112	
69q, y,z	glass; 15 beads	A171	33.175.113	
			33.175.114	
			(115-70 nos. not used)	
26x	pottery; cover, glazed	A172.3	33.175.171	
220	pottery; jar, small	A172.8	33.175.172	
23b	pottery; bowl	A172.10	33.175.173	
26w	pottery; cover, glazed	A172.11	33.175.174	
22p	pottery; jar, small	A172.12	33.175.175	
121	stone(?); lintel	A185	33.175.176	
19b	pottery; jar, inscribed	A206.1	33.175.177	
19a	pottery; jar, inscribed	A206.2	33.175.178	
	bronze; lamp stand	F173, 174	34.107.1	<i>BMMA</i> II, fig. 36; Frye 1973, fig. 16

APPENDIX B: Artifacts from Qasr-i Abu Nasr in The Metropolitan Museum of Art (cont'd)

Figure	Description	Photograph no.	Accession no.	Published
40c	pottery; storage jar	F101, 36	34.107.2	<i>BMMA</i> II, fig. 19
72a	bronze; gazelle head	F179	34.107.3	<i>BMMA</i> II, fig. 35
43a	pottery; jar	F125	34.107.4	<i>BMMA</i> II, fig. 22
50g	pottery; bowl	F132	34.107.5	<i>BMMA</i> II, fig. 20
48i	pottery; jar, small	F157.2	34.107.6	<i>BMMA</i> II, fig. 18
55d	pottery; lamp, glazed	F155.2	34.107.7	<i>BMMA</i> II, fig. 24b
58bb	glass; bottle	F184.1	34.107.8	
19g	pottery; juglet	A87.5	34.107.9	
16g	pottery; juglet	A88.4	34.107.10	
19c	pottery; jar	A87.1	34.107.11	
19k	pottery; jug	A276.1	34.107.12	
	pottery; juglet	A276.3	34.107.13	
18g	pottery; pot	A91.3	34.107.14	
23d	pottery; brazier	A273.7	34.107.15	
26z	pottery; cover	A157.2	34.107.16	
19h	pottery; jar	A132.5	34.107.17	
26cc	pottery; lantern	A103	34.107.18	
17c	pottery; jug	A276.2	34.107.19	
17b	pottery; jug	A178.2	34.107.20	
16c	pottery; jar	A279	34.107.21	
44f	pottery; jar	F154.2	34.107.22	
44h	pottery; jar	F117.2	34.107.23	
44e	pottery; jar	F154.1	34.107.24	
45c	pottery; jug	F122.1	34.107.25	
46h	pottery; juglet	F147.1	34.107.26	
47k	pottery; pot	F139.2	34.107.27	
47f	pottery; pot	F140.1	34.107.28	
54c	pottery; bowl, spout	F141.1	34.107.29	
	pottery; jar	F124.1	34.107.30	
17g	pottery; pot	A72	34.107.31	
44b	pottery; jar	F148.2, 73, 74	34.107.32	
	pottery; jar	F115.1	34.107.33	
43h	pottery; jar	F118.2	34.107.34	
47b, 77b	pottery; jar	F158.1	34.107.35	
44a	pottery; jar	F149.2	34.107.36	
79j	pottery; jar	F129.1	34.107.37	
53y	pottery; stand	F146.1, 65, 66	34.107.38	
53z	pottery; stand	F146.2	34.107.39	
54d	pottery; bowl, spout	F150.1	34.107.40	<i>BMMA</i> II, fig. 23
47e	pottery; jar, small	F160.3	34.107.41	
45e	pottery; juglet	F159.4	34.107.42	
16b	pottery; jar	A124	34.107.43	
	pottery; jar, small	F156.2	34.107.44	
53e	pottery; cover	F343.10	34.107.45	
79v	pottery; jar, glazed	F155.3	34.107.46	<i>BMMA</i> II, fig. 24
19d	pottery; jar	A132.4	34.107.47	

APPENDIX B: Artifacts from Qasr-i Abu Nasr in The Metropolitan Museum of Art (cont'd)

Figure	Description	Photograph no.	Accession no.	Published
48g	pottery; jar	F161.3	34.107.48	
78b	pottery; jar	F161.1	34.107.49	
20c	pottery; jar	A204, 284	34.107.50	
46b	pottery; pitcher	F152.1	34.107.51	
45b	pottery; juglet	F130.1	34.107.52	
45h	pottery; jug	F119.2	34.107.53	
52f	pottery; bowl	F143.1	34.107.54	
52q	pottery; pan	F144.2	34.107.55	
42k	pottery; storage jar	F116	34.107.56	
21t	pottery; jar	A167	34.107.57	
42d	pottery; storage jar	F103	34.107.58	
40a	pottery; storage jar	F43, 105.6	34.107.59	
68w	stone; bowl	F63, 136	34.107.60	
12a	stone, black; mortar	F166	34.107.61	<i>JNES</i> 24, pl. 75.17
12e	stone, black; plaque	F165	34.107.62	<i>BMMA</i> II, fig. 26; <i>JNES</i> 24, pl. 75.18
72b	stone; bird's head	F163, 164	34.107.63	<i>BMMA</i> II, fig. 30; <i>JNES</i> 24, fig. 21
73a	stone; statuette	F182, 183	34.107.64	
68b	stone; mace head	F191	34.107.65	
	stone, limestone; cylinder seal		34.107.66	Frye 1973, n. 32, pl. 6
59d	glass; figurine	F186.1	34.107.67	<i>BMMA</i> II, fig. 31
	pottery; bottle neck		34.107.68	
59a	glass; alembec	F189	34.107.69	<i>BMMA</i> II, fig. 29
58g	glass; bottle	F188.1	34.107.70	
59z	glass; bowl	F185.2	34.107.71	
66r	bronze; Bes head	F170	34.107.72	<i>BMMA</i> II, fig. 34
18h	pottery; pot	A144	34.107.73	
62t	silver; bowl	F176	34.107.74	
64c	bronze; buckle	F247.7	34.107.75	
23i	pottery; jar	A132.3	34.107.76	
65f	bronze; fork	F221.3	34.107.77	<i>BMMA</i> II, fig. 32
65h	bronze; fork	F221.4	34.107.78	<i>BMMA</i> II, fig. 32
65j	bronze; fork	F221.5	34.107.79	<i>BMMA</i> II, fig. 32
65i	bronze; spoon	F222.2	34.107.80	<i>BMMA</i> II, fig. 32
	bronze; spoon		34.107.81	<i>BMMA</i> II, fig. 32
61s	bronze; ladle	F222.6	34.107.82	<i>BMMA</i> II, fig. 32
62u	bronze; bowl	F223	34.107.83	
60f	bronze; rake	F224.1	34.107.84	
	bronze; figurine		34.107.85	
62o	pewter; handle		34.107.86	
62e	bronze; dropper	F226.1	34.107.87	
	bronze; mortar		34.107.88	
	gold; jewelry	F194.1	34.107.89	<i>BMMA</i> II, fig. 28
	gold; earring	F194.2	34.107.90	<i>BMMA</i> II, fig. 28
	gold; pendant	F194.4	34.107.91	<i>BMMA</i> II, fig. 28

APPENDIX B: Artifacts from Qasr-i Abu Nasr in The Metropolitan Museum of Art (cont'd)

Figure	Description	Photograph no.	Accession no.	Published
	gold; earring	F194.6	34.107.92	
	gold; leaf		34.107.93	
	gold, pearl; earring	F194.10	34.107.94	<i>BMMA</i> II, fig. 28
	gold; pendant	F194.11	34.107.95	<i>BMMA</i> II, fig. 28
	gold; pendant	F194.12	34.107.96	<i>BMMA</i> II, fig. 28
	gold; button	F194.13	34.107.97	<i>BMMA</i> II, fig. 28
	gold, stone; pendant	F194.14	34.107.98	<i>BMMA</i> II, fig. 28
	silver; ring	F195.3	34.107.99	
	silver; pendant	F195.1	34.107.100	
	silver; ring	F195.4	34.107.101	
72c	pottery; spout	F219.2	34.107.102	
67c	stone; jar	F376.1	34.107.103	
72g	pottery; figurine	F219.4	34.107.104	
64z	bronze; pendant	F246.4	34.107.105	
64f	bronze; buckle	F247.3	34.107.106	
			(107 no. not used)	
70a	stone, copper; pendant	F248.10	34.107.108	
	amethyst; bead	F248.4	34.107.109	
70r	stone; pendant	F248.11	34.107.110	
70h	carnelian; bead	F248.9	34.107.111	
70s	stone, black; bead	F248.5	34.107.112	
70q	agate; pendant	F248.7	34.107.113	
70y	agate; pendant	F248.15	34.107.114	
	glass; bead	F231	34.107.115	
	glass; bead	F231	34.107.116	
	glass; bead	F231	34.107.117	
69p	glass; bead	F231.4	34.107.118	
	glass; bead	F231	34.107.119	
69k	glass; bead	F231.11	34.107.120	
69j	glass; bead	F231.12	34.107.121	
	glass; bead	F231	34.107.122	
	stone; bead	F231	34.107.123	
	glass; bead	F231	34.107.124	
	glass; bead	F231	34.107.125	
69r	glass; bead	F231.22	34.107.126	
69s	glass; bead	F231.18	34.107.127	
69t	glass; bead	F231.20	34.107.128	
	bone; button	F230.1	34.107.129	
	bone; button	F230.5	34.107.130	
71m	bone; button	F230.7	34.107.131	
71o	shell; ornament	F230.9	34.107.132	
71n	shell; ornament	F230.11	34.107.133	
	glass; ring	F249	34.107.134	
64a	bronze; buckle	F247.5	34.107.135	
65a	bronze; needle	F192.1	34.107.136	
	bronze; needle	F192.2	34.107.137	
65m	bronze; pin	F192.4	34.107.138	

APPENDIX B: Artifacts from Qasr-i Abu Nasr in The Metropolitan Museum of Art (cont'd)

Figure	Description	Photograph no.	Accession no.	Published
65e	bronze; needle		34.107.139	
	bronze; pin	F192.7	34.107.140	
	bronze; handle	F192.9	34.107.141	
	bronze; pin	F193.4	34.107.142	
	bronze; pin	F193.3	34.107.143	
65z	silver; pin	F193.2	34.107.144	
65s	lead; pin	F193.1	34.107.145	
63q	bronze; arrow head		34.107.146	
63k	bronze; arrow head		34.107.147	
63r	bronze; arrow head		34.107.148	
63h	bronze; arrow head		34.107.149	
63t	bronze(?); arrow head		34.107.150	
63s	bronze; arrow head		34.107.151	
63e	iron; arrow head		34.107.152	
63dd	iron; arrow head		34.107.153	
63bb	bronze; arrow head		34.107.154	
63f	bronze; arrow head		34.107.155	
63i	bronze; arrow head		34.107.156	
68k	stone, black; pestle	F374.3	36.30.1	
	stone, black; weight	F530	36.30.2	
	stone, black; weight		36.30.3	
67h	stone, black; palette	F375.1	36.30.4	
	stone, agate; seal stone(?)		36.30.5	
	pottery; cone		36.30.6	
74d	pottery; die	F536.1	36.30.7	
	stone, flint; arrow head		36.30.8	
	stone, flint; blade		36.30.9	
62f	bronze; mirror, lion	F516, 517	36.30.10	
	bronze; cover	F366.4	36.30.11	
	stone; whetstone	F369.4	36.30.12	
	stone; whetstone	F369.9	36.30.13	
68c	stone; whetstone		36.30.14	
	stone; bead		36.30.15	
69hh	stone; bead	F529.8	36.30.16	
	stone; bead		36.30.17	
	stone; bead		36.30.18	
	pottery; ostracon	F507.1	36.30.19	
	pottery; ostracon		36.30.20	
	pottery; ostracon	F509.2	36.30.21	
	stone; seal	F553	36.30.22	Frye 1973, p. 39, 24
	stone; seal		36.30.23	Frye 1973, pp. 38-39, 7
	frit; scarab	F563.1	36.30.24	Frye 1973, p. 40, 27
	carnelian; seal		36.30.25	Frye 1973, p. 39, 15

APPENDIX B: Artifacts from Qasr-i Abu Nasr in The Metropolitan Museum of Art (cont'd)

Figure	Description	Photograph no.	Accession no.	Published
	carnelian; seal		36.30.26	Frye 1973, p. 39, 16
	carnelian; seal		36.30.27	Frye 1973, p. 39, 9
	carnelian; seal		36.30.28	Frye 1973, p. 39, 10
	carnelian; seal		36.30.29	Frye 1973, p. 39, 11
	carnelian; seal		36.30.30	Frye 1973, p. 39, 12
	carnelian; seal		36.30.31	Frye 1973, p. 39, 13
	hematite; seal		36.30.32	Frye 1973, p. 39, 14
	crystal; seal		36.30.33	Frye 1973, p. 38, 5
	chalcedony; seal		36.30.34	Frye 1973, p. 38, 1
43k	pottery; jar	F316	36.30.35	
	pottery; bread stand	F329.2	36.30.36	
79k	pottery; jar	F317	36.30.37	
79t	pottery; tuyère	F342.2	36.30.38	
48d	pottery; jar, small	F505.1	36.30.39	
48r	pottery; jar	F505.2	36.30.40	
45d,76t	pottery; juglet	ST24.1	36.30.41	
46c	pottery; juglet	F497.1	36.30.42	
54k	pottery; beaker	F605.1	36.30.43	
50d	pottery; bowl, tripartite	F322	36.30.44	
55s	pottery; jar shoulder	F340.1	36.30.45	
53u	pottery; cover	F343.3	36.30.46	
54l	pottery; pilgrim bottle	F344.5	36.30.47	
55m	pottery; sherd	F347	36.30.48	
47h	pottery; jar, glazed	F499	36.30.49	
51n	pottery; bowl	F493, 494	36.30.50	
51a	pottery; beaker	F503	36.30.51	
23m	pottery; pot	A140.1	36.30.52	
52c	pottery; basin	F491	36.30.53	
44d	pottery; jar		36.30.54	
79o	pottery; juglet		36.30.55	
48p	pottery; jar, small		36.30.56	
	pottery; neck		36.30.57	
58c	glass; bottle, small	F543	36.30.58	
62v	bronze; bowl, oval	F520	36.30.59	
59l	glass; balsarium, camel	F382	36.30.60	
59c	glass; handle, head	F381.2	36.20.61	
	pottery; tablet		36.30.62	
63hh	shell; handle		36.30.63	
76r	shell, iron; buckle	ST30	36.30.64	

APPENDIX B: Artifacts from Qasr-i Abu Nasr in The Metropolitan Museum of Art (cont'd)

Figure	Description	Photograph no.	Accession no.	Published
76e	iron, shell; necklet	ST25.1	36.30.65	
66v	iron; ring	F363	36.30.66	
	gold; coin, Byzantine		36.30.67	
66cc	bronze; bracelet	F362.4	36.30.68	Frye 1973, p. 32, 44
66z	bronze; bracelet	F362.8	36.30.69	
	bronze; ring	F584.10	36.30.70	
66s	bronze; ring	F539.5	36.30.71	
65p	bronze; pin		36.30.72	
63b	iron; spear head	F373.2	36.30.73	
60d	iron; sickle	F350.5	36.30.74	
60n	iron; key	F353.5	36.30.75	
61n	iron; ladle	F354.3	36.30.76	
60v	iron; crowbar	F354.4	36.30.77	
65q	bronze; pin	F525.7	36.30.78	
60r	iron; key	F349.1	36.30.79	
60t	iron; key		36.30.80	
60aa	iron; spear head	F361.2	36.30.81	
60k	iron; pruning hook	F356.8	36.30.82	
65ii	bronze; bell	F519.1	36.30.83	
63ff	ivory; handle	F546.3	36.30.84	
	pottery; sealings		36.30.85-280	
	stone; ostracon		36.30.281	
63w	iron; arrow head	F355.2	36.30.282	
	iron; arrow head	F355.8	36.30.283	
	iron; arrow head	F355.10	36.30.284	
63mm	iron; knife blade	F356.4	36.30.285	
63kk	iron; knife blade	F356.5	36.30.286	
63nn	iron; knife blade	F356.7	36.30.287	
61h	iron; nail	F357.1	36.30.288	
61i	iron; nail	F357.6	36.30.289	
61p	iron; clamp	F357.12	36.30.290	
64r	iron; hook	F358.4	36.30.291	
61k	iron; hook	F358.2	36.30.292	
60o	iron; fork	F358.3	36.30.293	
62c	iron; dish	F523.2	36.30.294	
63ee	iron, bronze; armor scales silver, bronze; coins	F522	36.30.295	
			36.30.296-337	Frye 1973, pp. 26-36

APPENDIX C: Colors for Ceramics

Figure	Description	Accession no.	Munsell color no.
16a	orange, red slip	33.175.67	7.5 YR 8/4, 2.5 YR 5/6
16b	greenish cream	34.107.43	10 YR 8/3
16c	gray, black slip	34.107.21	2.5 YR 5/0, 2.5 YR 4/0
16d	gray, black slip	33.175.69	10 YR 7/2, 10 YR 5/1
16e	gray, black slip	33.175.7	2.5 YR 6/2, 2.5 YR 4/0
16g	orange, cream slip	34.107.10	5 YR 7/4, 10 YR 8/4
16h	buff-tan	33.175.72	10 YR 8/4
17a	orange, orange-cream surfaces	33.175.4	2.5 Y 8/2, 7.5 YR 7/4
17b	red, buff slip	34.107.20	10 YR 8/3, 2.5 YR 5/4
17c	cream	34.107.19	2.5 Y 8/2
17d	greenish cream	33.175.81	10 YR 7/3
17g	brown-gray	34.107.31	10 YR 5/2
18g	gray	34.107.14	7.5 YR 5/2
18h	black	34.107.73	10 YR 4/1
18l	orange-red	33.175.5	2.5 YR 6/6
19a	greenish cream	33.175.178	5 Y 8/4
19b	greenish cream	33.175.177	5 Y 8/3
19c	cream	34.107.11	10 YR 8/2
19d	light orange	34.107.47	7.5 YR 7/4
19g	greenish cream	34.107.9	10 YR 8/4
19h	cream	34.107.17	2.5 Y 8/2
19i	greenish cream	33.175.71	2.5 Y 8/2
19j	light orange	33.175.3	5 YR 7/4
19k		34.107.12	10 YR 8/4
20b	cream	33.175.68	2.5 Y 8/2
20c	cream	34.107.50	2.5 Y 8/2
20e	gray	33.175.82	10 YR 8/2
20f	greenish cream	33.175.79	2.5 Y 8/4
20g	cream	33.175.80	10 YR 8/2, 7.5 YR 7/4
20h	light orange	33.175.73	2.5 Y 8/4
20i	greenish cream	33.175.2	2.5 Y 8/4
21a	cream	33.175.76	10 YR 8/3
21b	greenish cream	33.175.74	2.5 Y 8/2
21p	cream	33.175.96	10 YR 8/1
21t	cream	34.107.57	2.5 Y 8/2
22o	light orange	33.175.172	10 YR 7/4
22p	greenish cream	33.175.175	2.5 Y 8/2
23b	cream-tan	33.175.173	10 YR 7/4
23d	orange, cream surface	34.107.15	2.5 Y 8/2, 5 YR 7/4
23i	buff-cream	34.107.76	10 YR 8/4
23l	cream	33.175.83	2.5 Y 8/4, 2.5 YR 4/6
23m	orange	36.30.52	5 YR 7/4
24a	orange	33.175.43	5 YR 7/4, 10 YR 8/1
24b	orange-tan	33.175.64	7.5 YR 7/4, 10 YR 8/1
24c	cream	33.175.42	7.5 YR 7/4, 10 YR 8/1
24e	cream	33.175.40	7.5 YR 7/6
24f	light orange	33.175.41	5 YR 7/4, 10 YR 8/2

APPENDIX C: Colors for Ceramics (cont'd)

Figure	Description	Accession no.	Munsell color no.
24h	orange	33.175.49	5 YR 7/4
24l	yellow	33.175.97	10 YR 8/2
24n	cream	33.175.38	5 YR 6/6
24p	cream	33.175.39	10 YR 8/3, 5 G 6/2
24s	cream	33.175.62	10 YR 8/4
24u	light orange	33.175.8	5 YR 7/3
25z	cream-buff, blue glaze	33.175.63	7.5 YR 7/6, 5 G 6/2
26a	greenish cream	33.175.107	2.5 Y 8/2
26b	cream	33.175.106	2.5 Y 8/2
26c	buff-orange	33.175.108	10 YR 8/4
26d	orange	33.175.105	5 YR 7/4, 10 YR 8/2
26e	greenish cream	33.175.102	10 YR 7/6
26f	greenish cream	33.175.104	10 YR 6/4
26w	cream	33.175.174	10 YR 7/4
26z	green	34.107.16	10 YR 5/2
26cc	light orange-buff	34.107.18	10 YR 8/4
40c	pink, buff slip	34.107.2	10 YR 7/4
42d	buff	34.107.58	7.5 YR 6/4
42k	gray	34.107.56	10 YR 5/1
43a	buff, red slip	34.107.4	5 YR 7/6, 2.5 YR 5/6
43h	greenish buff	34.107.34	2.5 Y 8/2, 7.5 YR 7/4
43k	buff	36.30.35	10 YR 8/2, 10 YR 5/1
44a	buff	34.107.36	10 YR 7/6
44b	orange buff, red slip(?)	34.107.32	10 YR 8/4, 5 YR 7/6
44d		34.107.54	10 YR 7/4
44e	buff-yellow, red slip	34.107.24	10 YR 8/4
44f	orange tan, red slip	34.107.22	5 YR 8/4, 2.5 YR 4/6
44h	buff-tan, black slip	34.107.23	10 YR 8/4, 10 YR 6/1
45b	cream	34.107.52	2.5 Y 8/2
45c	buff-yellow	34.107.25	10 YR 7/4
45d	pink-orange-cream	34.107.41	5 YR 7/4
45e	light brown, dark orange-tan slip	34.107.42	7.5 YR 7/4, 2.5 YR 5/6
45h	light gray-cream, cream slip(?)	34.107.53	7.5 YR 8/2
46b	cream-buff	34.107.51	10 YR 7/3
46h	cream	34.107.26	10 YR 8/3
47b	cream	34.107.35	10 YR 8/3
47e	buff-light orange, buff slip	34.107.41	7.5 YR 7/4
47f	black-tan	34.107.28	10 YR 4/1
47h	cream, green glaze	36.30.49	2.5 Y 8/2
47k	black-gray	34.107.27	10 YR 3/1
48d	red	36.30.39	5 YR 6/6
48g	cream	34.107.48	10 YR 7/4
48i	gray-brown, black slip	34.107.6	10 YR 5/2
48p	dark red	36.30.56	5 YR 5/4
48r	orange-red	36.30.40	2.5 YR 5/6
50d	light orange, red slip	36.30.44	5 YR 7/4, 2.5 YR 5/6
50g	buff, red slip	34.107.5	10 YR 8/2, 5 YR 6/6

APPENDIX C: Colors for Ceramics (cont'd)

Figure	Description	Accession no.	Munsell color no.
51n	orange, red slip	36.30.50	2.5 YR 6/4, 2.5 YR 5/6
52c	orange-tan (pink)	36.30.53	5 YR 7/4
52f	pink	34.107.54	5 YR 7/3, 7.5 YR 8/2
52q	light orange, red slip	34.107.55	2.5 YR 6/6, 10 YR 8/4
53e	red, red slip	34.107.45	2.5 YR 4/4
53u	buff	36.30.46	7.5 YR 7/4
53y	cream (gray-green)	34.107.38	10 YR 8/4
53z	buff-tan	34.107.39	5 YR 7/4
54c	black-tan	34.107.29	10 YR 4/2
54d	cream	34.107.40	2.5 Y 8/4
54k	gray	36.30.43	2.5 Y 7/2
54l	gray, red-orange surface, red brown slip	36.30.47	2.5 YR 4/4
55m	brown, cream-tan slip	36.30.48	5 YR 5/4, 7.5 YR 8/4
55s	red-brown, red slip	36.30.45	2.5 YR 5/4
78b	buff, red slip(?)	34.107.49	7.5 YR 7/4
79j	buff	34.107.37	10 YR 7/3
79k	gray	36.30.37	10 YR 6/1
79o	light gray, black slip	36.30.55	5 YR 5/1, 7.5 YR 4/0
79t	tan	36.30.38	5 YR 6/3
79v	cream, green glaze	34.107.46	7.5 YR 8/2

Key to Abbreviated References for Archaeological Sites

Abu Sarifa: Adams 1970
Bahrain: C. E. Larsen 1983
Bakr-Awa: Madhloum 1962, 1965
Bastam: Kleiss 1972; Kroll 1979
Bisitun: Kleiss 1970
Bushire: Pezard 1914
Choche: Venco Ricciardi 1967
Corinth: Davidson 1952
Ctesiphon: Kühnel and Wachtsmuth 1933; J. H. Schmidt 1934
Dura-Europos: Clairmont 1963; Toll 1943, 1946
Fasa: Hansman 1975
Godin: Young 1969; Young and Levine 1974
Hama: Riis and Poulsen 1967; Ploug 1969
al-Hasa: Whitcomb 1978
Hasanlu: Young 1965
al-Hira: Rice 1934
Hissar: E. F. Schmidt 1937
Istakhr: unpublished notes, The Oriental Institute, Chicago
Julfar: de Cardi 1971
Khirbat al-Karak: Delougaz and Haines 1960
Kish: Harden 1934; Reitlinger 1935; Watelin 1938; Moorey 1978
al-Kufa: Mustafa 1963
Mahuz: Venco Ricciardi 1970-71; Negro Ponzi 1968-69, 1970-71b
al-Mina: Lane 1938
Naqsh-i Rustam: E. F. Schmidt 1970; Kleiss 1976
Nessana: Colt 1962
Nimrud: Oates 1968
Nishapur: Wilkinson 1973; Allan 1982
Oman (BB15): Whitcomb 1975
Panjikent: Raspopova 1980
Pasargadae: D. Stronach 1978
Pella: Smith 1973
Persepolis: E. F. Schmidt 1939, 1957
Qal'eh Dukhtar: Huff 1976, 1978
Qumis, Shahr-i: Hansman and Stronach 1970, 1974; Stronach 1979
Samarra: Sarre 1925; Iraq, Department of Antiquities 1940; Lamm 1928
Seleucia: Waterman 1931; Yeivin 1933; Negro Ponzi 1970-71a
Siraf: Whitehouse 1968 . . . 1979
Susa: Koechlin 1928; Ghirshman 1954; Rosen-Ayalon 1972a, 1974a; Kervran 1974b, 1977, 1979a; Labrousse and Boucharlat 1972b; Boucharlat and Labrousse 1979b; Lamm 1931; de Mecquenem 1943
Takht-i Sulaiman: Huff 1965; E. and R. Naumann 1969
Wasit: Safar 1945
Yahya: Lamberg-Karlovsky 1970, 1972
Ziwiye: Young 1965

Abbreviations

<i>AMI</i>	<i>Archäologische Mitteilungen aus Iran</i> (Berlin, 1929–38, 1968–)	<i>JAOS</i>	<i>Journal of the American Oriental Society</i> (New Haven, 1849–)
<i>BASOR</i>	<i>Bulletin of the American Schools of Oriental Research</i> (New Haven, 1919–)	<i>JESHO</i>	<i>Journal of Economic and Social History of the Orient</i> (Leiden, 1957–)
<i>BGA</i>	<i>Bibliotheca Geographorum Arabicorum</i> (de Goeje, ed., 1879–1939)	<i>JGS</i>	<i>Journal of Glass Studies</i> (Corning, New York, 1959–)
<i>BMMA</i>	<i>Bulletin of The Metropolitan Museum of Art</i> (New York, 1942–43–); <i>BMMA</i> I: Hauser 1933; <i>BMMA</i> II: Hauser and Upton 1934; <i>BMMA</i> III: Upton 1936	<i>JNES</i>	<i>Journal of Near Eastern Studies</i> (Chicago, 1942–)
<i>BSOAS</i>	<i>Bulletin of the School of Oriental and African Studies</i> (London, 1917–)	<i>JRAS</i>	<i>Journal of the Royal Asiatic Society of Great Britain and Ireland</i> (London, 1834–)
<i>CNRS</i>	Centre National de la Recherche Scientifique (Paris)	<i>MDAI</i>	Mémoires de la délégation archéologique en Iran (Paris)
<i>DAFI</i>	<i>Délégation archéologique française en Iran, Cahiers de la</i> (Paris, 1971–)	<i>MDP</i>	Mémoires de la délégation en Perse (Paris)
<i>EI</i> ¹	<i>Encyclopedia of Islam</i> (Leiden, 1st ed., 1913–1936, <i>EI</i> ² 1960–)	<i>MESA</i>	<i>Middle East Studies Association, Bulletin</i> (New York, 1967–)
<i>IFAO</i>	Institut français d'archéologie orientale (Cairo)	<i>OIC</i>	Oriental Institute Communications (Chicago, 1922–)
<i>JA</i>	<i>Journal asiatique</i> (Paris, 1822–)	<i>OIP</i>	Oriental Institute Publications (Chicago, 1924–)
		<i>ZDMG</i>	<i>Zeitschrift der Deutschen morgenländischen Gesellschaft</i> (Leipzig, 1847–)

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